



GOVERNMENT OF INDIA  
TARIFF COMMISSION

**R E P O R T**  
**ON**  
**The Continuance of Protection to the**  
**Aluminium Industry**

BOMBAY 1960

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**India, Tariff (——Commission)**

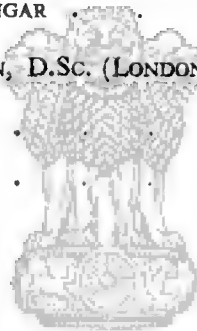
**Report on the continuance of  
protection to the Aluminium  
Industry 1960.**



सत्यमेव जयते

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SECRETARY

DR. RAMA VARMA

GOVERNMENT OF INDIA  
MINISTRY OF COMMERCE AND INDUSTRY

New Delhi, the 10th December, 1960.

**RESOLUTION**

**Tariffs**

**No. 3(3)-T.R./60.**—The Tariff Commission has submitted its Report on the continuance of protection to the Aluminium Industry on the basis of an enquiry undertaken by it under sections 11(e) and 13 of the Tariff Commission Act, 1951. Its recommendations are as follows:—

- (1) Protection granted to aluminium ingots, bars etc., covered by I.C.T. item No. 66(1) and aluminium manufactures covered by I.C.T. item No. 66(a) should be continued for a further period of four years ending 31st December, 1964, but the rate of protective duty should be reduced to 25 per cent *ad valorem*.
- (2) The existing concessional rates of duty of 20 per cent *ad valorem*, standard, and 10 per cent *ad valorem*, preferential, on imports of alumina by the aluminium manufacturers should be continued up to 31st December, 1964.
- (3) The Railway Board should consider whether alumina consigned to smelters could be classified in the same category as other beneficiated or crude ore for charging freight.
- (4) To enable the industry to keep its cost of production under control and to effect economies wherever possible, it is essential (i) to maintain rates for supply of electric power stable for a fairly long period and (ii) to supply adequate power to meet the growing needs of the industry at reasonable rates.

2. Government accept recommendation (1) in so far as continuance of protection to the Industry for a further period of four years ending 31st December, 1964 is concerned. As regards the reduction recommended in the rate of protective duty, the question whether, and if so, to what extent any relief or incentive is required for the consumers of Aluminium and whether a reduction in duty will secure the developmental objective, required further study and it has, therefore, been decided not to accept this part of the recommendation.

3. Government accept recommendation (2) above.

4. Government have taken note of recommendations (3) and (4) and suitable action will be taken to implement them to the extent possible.

**ORDER**

ORDERED that the Resolution be published in the *Gazette of India* and a copy of it be communicated to all concerned.

S. RANGANATHAN,

*Secretary to the Government of India.*

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## REPORT ON THE CONTINUANCE OF PROTECTION TO THE ALUMINIUM INDUSTRY

The history of tariff protection to the aluminium industry is given in our previous Reports of 1955 and 1958. Acting on the recommendations of the Tariff Board and their re-examination by an Official Committee, Government put into effect in 1949 a scheme which involved protection to the industry by means of *ad valorem* and specific import duties as well as subsidies. Thereafter on a review of the position of the industry by the Tariff Board in 1951, Government decided to discontinue the specific duties, continue the *ad valorem* import duty till May 1952 and stop subsidies to Indian Aluminium Company from 15th May 1950 and to Aluminium Corporation of India from the end of October 1950. Protection to the industry was subsequently extended first to 31st December 1952, again to 31st December 1953 and still further to 31st December 1955. In accordance with the recommendations in our Reports of 1955 and 1958 Government continued protection to the industry at the existing level of 35 per cent *ad valorem* upto 31st December 1958 and 31st December 1960 respectively. By the Finance Act, 1960, excise duties at Rs. 300 per metric ton of aluminium in any crude form including ingots, bars, blocks, slabs, billets, shots and pellets and Rs. 500 per metric ton of aluminium manufactures namely, plates, sheets, circles, strips and foil in any form or size were imposed from 1st March 1960. To remove the disadvantage of the excise duty to the domestic industry, countervailing duties at the above rates of excise were fixed in respect of imports of the corresponding products. By a Notification issued on 20th April 1960, Government exempted aluminium in any crude form if manufactured from old aluminium scrap or scrap obtained from virgin metal on which the appropriate excise duty has been paid from the whole of the excise duty payable thereon, while in the case of aluminium manufactures produced from such scrap, the excise duty payable thereon has been reduced to Rs. 200 per metric ton.

2. The present inquiry has been undertaken under section 11(e) read with section 13 of the Tariff Commission Act, 1951 under which the Commission is empowered to investigate into the protection granted to an industry and to recommend any further action required with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

3.1. Questionnaires were issued to producers, importers and consumers of aluminium and its semi-manufactures in February 1960. A press note was issued on 16th February 1960 inviting firms, associations and others interested in the inquiry to obtain copies of relevant questionnaires and submit their replies. The Indian Non-Ferrous Metals

Manufacturers' Association, Calcutta and the All India Non-Ferrous Metalware Manufacturers' Association, Bombay were requested to furnish memoranda containing their views on various aspects of the inquiry. A memorandum on the progress made by the industry since the last inquiry, its present position and plans for future expansion was called for from the Development Wing. A letter was issued to the Director General of Supplies and Disposals calling for information regarding Government purchases of aluminium, prices at which they were purchased and quality of the indigenous products. The Indian Standards Institution was addressed for information pertaining to formulation of specifications and use of Certification Marks. Information regarding c.i.f. prices and landed costs of latest consignments of aluminium products imported into the country was sought from the Collectors of Customs at the principal ports and the State Trading Corporation of India. The High Commission of India in the United Kingdom and Canada and the Embassy of India in U. S. A., West Germany, France and Austria were addressed for information regarding f.o.b. prices of aluminium ingots, sheets and circles in the respective countries. The Directors of Industries of the Governments of Bombay, West Bengal, Kerala and Madras were requested to furnish memoranda in respect of the manufacturing units located in their respective States. The Chief Secretaries to all the State Governments were invited to furnish their views if they were interested in the inquiry and also to apprise the Commission of the steps taken by them to exercise quality control over the producers of aluminium utensils in their States. A list of those to whom questionnaires and letters were issued and from whom replies or memoranda were received is given in Appendix I.

3.2. A list of factories visited by the Commission and its Officers is given in Appendix II. Shri U. R. Padmanabhan, Cost Accounts Officer examined the cost of production of aluminium and its manufactures produced by Indian Aluminium Co. Ltd., and Aluminium Corporation of India Ltd. from 28th April to 16th May 1960.

3.3. A public inquiry into the industry was held on 20th July 1960. A list of persons who attended the inquiry is given in Appendix III.

4. The existing scheme of protection covers (i) aluminium in any crude form including ingots, bars, blocks, slabs, billets, shots and pellets and (ii) aluminium manufactures namely, plates, sheets, circles, strips and foil including foil in any form or size ordinarily used as parts and fittings of tea-chests. A proviso to I.C.T. Item No. 70(1) adds that all non-ferrous alloys and manufactures of metal and alloys containing more than 97 per cent of aluminium shall be deemed to be aluminium in a crude form or aluminium manufactures as the case may be. After some discussion at the public inquiry, it was agreed that there is no need to alter the existing scope of protection.

5. We give below the recommendation we made in the last Report on matters other than tariffs and the extent to which it has been implemented.

**Implementation of ancillary recommendation made in the Report of 1958.**

*Recommendation*

“The requirements of imported raw materials by Aluminium Corporation of India Ltd. and Indian Aluminium Co. Ltd. should be assessed on the basis of their respective revised capacities claimed by the two units.”

This recommendation has been accepted by Government. The Development Wing in a letter to us has indicated the capacities of the producers and reported that import licences for raw materials are being issued in accordance with their capacities and production.

6.1. In the Second Five Year Plan the targets of capacity and production for aluminium had been originally fixed at 30,000 tons and 25,000 tons respectively. According to the revised estimates of the Planning Commission, the capacity and production in 1960-61, the last year of the Second Plan, would be only 17,500 tons and 17,000 tons respectively. Whatever might have been the reasons for fixing the original targets and for the failure to achieve even those moderate targets, the fact remains that aluminium will be of vital and growing importance in the industrial development of the country. It is the only non-ferrous metal, for which the country has abundant supplies of raw materials. According to one estimate, India possesses bauxite, the basic raw material for aluminium, to the extent of 250 million tons of which 25 million tons have already been proved to be suitable for the manufacture of aluminium. However, there are limiting factors for the rapid development of aluminium in the country. First, areas of large deposits of bauxite are not always connected with rail or road. Secondly, aluminium smelting requires abundant supplies of power at cheap rates and the prospects of obtaining power at bauxite sites are, in many cases, not bright. The latter need not be a handicap provided adequate transport facilities are available to move bauxite or alumina to the smelter sites where power is available in large quantities at cheap rates. Countries like Norway, Switzerland and Japan have established smelter capacities though they have no bauxite resources of their own. The progress of aluminium industry in the country will depend on cheap and abundant supplies of power and the facilities for transport of bauxite or alumina to the smelter sites.

6.2. As at the time of our last inquiry in 1958, the same two companies, namely, Aluminium Corporation of India Ltd. and Indian Aluminium Co. Ltd. continue to be the only manufacturers of aluminium ingots. The structure and organisation of these two units as described broadly in our last Report have not undergone any material



change. The Hirakud smelter of Indian Aluminium Co. which was under erection when our 1958 report was submitted, went into production in January 1959. The sales including miscellaneous incomes of the company increased from Rs. 548 lakhs in 1957 to Rs. 978 lakhs in 1959 and its net profits increased from Rs. 65 lakhs to Rs. 132 lakhs during the corresponding period. The financial year of Aluminium Corporation closes on 31st March and during the two accounting years 1957-58 and 1958-59 its net sales were Rs. 96 lakhs and Rs. 126 lakhs and the net profits Rs. 13 lakhs and Rs. 26 lakhs respectively.

### 6.3. Aluminium ingots.

6.3.1. The present capacity and production of ingots since 1958 of the above-mentioned units are given below together with the capacity adopted in our last Report:

Name of producer	Capacity stated in 1958 Report	Present licensed capacity	Present rated capacity reported by producer	Production in (In tons)		
				1958	1959	1960 (Jan-May)
1. Indian Aluminium Co.Ltd.						
(a) Alupuram . . . .	5,500	5,000	5,600	5,665	14,652	6,488
(b) Hirakud . . . .	..	10,000	10,000			
2. Aluminium Corporation of India . . . . .	2,200	2,400	2,200	2,469	2,462	899
<b>TOTAL</b>	<b>7,700</b>	<b>17,400</b>	<b>17,800</b>	<b>8,134</b>	<b>17,114</b>	<b>7,387</b>

These plants work on three-shift basis as production of aluminium is a continuous process. During the discussion at the public inquiry the representative of Aluminium Corporation agreed that as one of the turbines has since been repaired, the capacity of his factory may be rated at 2,300 tons a year. Accordingly, the present rated capacity of the industry works out to 17,900 tons. The output has increased two and a half times since our last inquiry as a result of the Hirakud plant going into production. The production of Indian Aluminium Company includes conductor grade aluminium also which amounted to 2,400 tons in 1958 and 2,751 tons in 1959. Government have stipulated that the company should supply 5,000 tons of conductor grade aluminium a year during 1960 and 1961.

**6.3.2. Expansion plans.**—Aluminium Corporation could not expand its capacity to 4,800 tons according to the licence granted to it in 1954. Subsequently, it has been permitted to expand its capacity to 7,500 tons a year. It has entered into an agreement with Aluminium-Industrie-Aktien Gesellschaft, Switzerland, for technical collaboration and expects to complete its expansion programme by 1962-63. Government have also approved of the plan of Indian Aluminium Co. to expand its ingot capacity at Hirakud from 10,000 to 20,000 tons. The alumina production at the Muri plant which feeds the smelter will also be increased from 20,000 to 54,000 tons a year. The company has entered into an agreement with its technical consultants, Aluminium Laboratories Ltd. of Canada for engineering design and technical services connected with the expansion. Foreign exchange required for the expansion plans estimated at Rs. 4.85 crores has been made available to the company through Government of India's Export-Import Bank Programme and through a loan from Aluminium Ltd., Canada. The company expects to complete its expansion of smelter capacity by the end of 1961. Additional quantity of electrolytic aluminium to be produced by the company will be reviewed by Government after it completes its expansion.

**6.3.3. New projects.**—(i) Hindustan Aluminium Corporation of which Birla Gwalior Ltd. are managing agents, is erecting its plant at Rihand (U. P.) in technical collaboration with Kaiser Aluminium & Chemical Corporation of U. S. A. The authorised capital of the Corporation is Rs. 20 crores. The plant is planned for an initial capacity of 20,000 tons of ingots of which one-third will be of electric grade and is scheduled to go into operation by June 1962.

(ii) Tendulkar Industries (Pvt.) Ltd. has been granted a licence to erect an aluminium plant near Chiplun (Maharashtra State) with an ingot capacity of 20,000 tons. It will draw its supply of electricity from Koyna. Arrangements for technical and industrial collaboration with Aluminium Co. of U. S. A. are under negotiation.

(iii) Madras Aluminium Ltd. of Coimbatore has obtained a licence to establish an aluminium plant with an ingot capacity of 10,000 tons at Salem (Madras State). Technical and financial collaboration with Messrs. Montecatini of Italy is under negotiation. Expectations are that the plant will be in production by the end of 1962.

**6.3.4.** When these new projects materialise there will be an additional ingot capacity of 50,000 tons. Together with the existing and planned capacity of Aluminium Corporation and Indian Aluminium Company the total installed capacity is expected to increase to 83,100 tons by the end of 1963. For the Third Five Year Plan the target for aluminium production has been tentatively fixed at 75,000 tons per annum.

6.4. *Secondary metals*.—At the last public inquiry it was generally agreed that scrap arisings for the year 1957 might be placed at 5,000 tons and the annual increase would be about 1,000 tons with a slightly upward trend on account of increasing consumption. These estimates were accepted during the course of the present inquiry also. The scrap arisings for 1960 may, therefore, be placed at not less than 8,000 tons.

#### 6.5. *Semi-manufactures and manufactures of aluminium*

6.5.1. The present scheme of protection covers the following aluminium manufactures viz. plates, sheets, circles, strips and foils including foil in any form or size ordinarily used as parts and fittings of tea-chests. Of the two manufacturers of aluminium ingots, Aluminium Corporation has its rolling mills integrated with its virgin metal plant at Jaykaynagar while the rolling mills of Indian Aluminium Company are located at Belur (Calcutta). Their annual capacity on three-shift basis and production since 1958 are given below :—

Name of the producer	Capacity adopted in the last Report	Present capacity	(In tons)					
			Production					
			1958		1959		1960 (Jan-May)	
			Sheets	Circles	Sheets	Circles	Sheets	Circles
Indian Aluminium Co. Ltd. Calcutta.	7300	9000	5608·00	3225·00	6482·00	3776·00	2765·60	1431·03
Aluminium Corporation of India Ltd. Calcutta	2000	2100	1248·56	661·41	1546·31	593·08	621·57	190·13
<b>TOTAL</b>	<b>9300</b>	<b>11100</b>	<b>6856·56</b>	<b>3886·41</b>	<b>8028·31</b>	<b>4369·08</b>	<b>3387·17</b>	<b>1621·16</b>

In addition to these two major units, there are nine units registered with the Development Wing for rolling sheets, strips and circles. These units work with other non-ferrous metals also and switch over from one metal to another according to circumstances. The three-shift capacity of these units for rolling non-ferrous metals generally and their production from 1958 are given below:

(In tons)

## PRODUCTION

Name of the producer	Capacity adopted in last Report	Present capacity	1958						1959						1960 (Jan-May)					
			Sheets			Circles			Sheets			Circles			Sheets			Circles		
1. Metal Rolling Works Pvt. Ltd., Bombay	2,500	2,500	77.15	1324.80	61.32	1528.72	27.77	538.56												
2. Devidayal Metal Industries (P) Ltd., Bombay	1,800	1,800	1.30*	544.60	1.75*	628.20	N.A.	284.09												
3. Popular Metal Works and Rolling Mills, Bombay.	600	600	491.00	..	562.00	..	167.00	..												
4. Rashtriya Metal Industries Ltd., Bombay	1,200	1,200	..	34.25	..	100.25	..	51.18												
5. Hindusthan Metal Refinery and Rolling Mills, Madras. (Mysore Premier Metal Factory).	600	600	..	463.00	..	516.14	..	197.09												
6. Vummidiar Mfg. (P) Ltd., Madras	..	N.A.	44.06*	..	50.36* (upto Sept.)	..	N.A.	..												
7. Aggarwal Metal Works, Rewari	..	600	..	31.16*	..	42.40*	..	N.A.												
8. Sri Mahesh Metal Works, Kishangarh	..	N.A.	..	46.25*	..	120.99*	..	N.A.												
9. Hooseini Metal Rolling Mills(P)Ltd., Bombay	..	600	54.00	103.00	71.00	125.00	5.00	45.00												
Total	6,700	7,900	667.51	2547.06	746.43	3061.70	199.77	1115.92												

\*Furnished by the Development Wing.

Besides the units mentioned above, there is a large number of small scale units which are not registered with the Development Wing. We have received some information about 45 such units located in seven different States with a single shift capacity adding upto 4,635 tons. Individual capacity varies from 100 to 600 tons in some cases but most of them fall under 100 tons. Their main difficulty is raw material and high prices of scrap.

**6.5.2. Expansion plans.**—Aluminium Corporation reports that it has obtained a licence to increase its rolling capacity to 4,400 tons for sheets and circles. Indian Aluminium Company has obtained a licence to expand its rolling capacity from 9,000 to 16,500 tons which is expected to materialise by 1962. Government has, however, pegged its production to 11,000 tons, 15,000 tons and 15,000 tons for the years 1962, 1963 and 1964 respectively with the object of assuring certain supplies of ingots for electrical purposes. It is understood that Tendulkar Industries and Hindustan Aluminium Corporation have plans for installing fabricating capacity which are under consideration by Government. Metal Rolling Works is also contemplating the manufacture of strips and coils.

#### 6.6. Aluminium foils.

6.6.1. Venesta Foils Ltd. is the only unit manufacturing foils and container sheets in the country. Its capacity and production are given below :—

				(In tons)		
	Capacity as stated in 1958 Report	Present Capacity		Production in		
		Licensed	Reported by producer	1958	1959	1960 (Jan-May)
Foils	1,600	2,000	3,000	1,581	1,925	1,075
Container sheets		1,200	800	283	504	267
<b>TOTAL</b>	<b>1,600</b>	<b>3,200</b>	<b>3,800</b>	<b>1,864</b>	<b>2,429</b>	<b>1,342</b>

In view of the divergence in figures of capacity, Venesta Foils was advised at the public inquiry to approach the Development Wing for revision. With its present output, the unit meets the packaging needs

of various industries like tea, coffee, tobacco, textiles, pharmaceuticals, toilet, dairy, confectionery, electricals, canning etc.

6.6.2. Aluminium Corporation has been granted a licence for the manufacture of aluminium foil with an installed capacity of 500 tons a year.

6.7. *Extrusion Plant.*—Indian Aluminium Company obtained a licence to raise the capacity of its extrusion plant from 1,000 tons to 3,700 tons a year.

7.1. The world demand for aluminium increased from 1.8 million tons in 1951 to over 3 million tons in 1958 and the demand continues to increase at a high rate. This increase in demand is attributed to the versatility of the metal which possesses the combination of lightness and strength, high thermal and electric conductivity, corrosion resistance and easy workability. Aluminium has various uses and new uses are still developing in competition with a number of other materials. Thus, aluminium sheet metal is competitive with galvanised iron and steel. Aluminium utensils serve somewhat the same uses as do cast iron, stainless steel, common steel, copper, brass, enamelware and earthenware. Aluminium foil shares markets with lead, tin, paper and plastics. Aluminium electrical conductors are competitive with copper. Further, of all the non-ferrous metals the prices of aluminium have remained more or less steady over a number of years. Indeed, the rapidly growing uses of aluminium are a direct reflection of its adaptability to many fabricating techniques and its economic feasibility in terms of basic cost and maintenance. Its demand will, therefore, depend on two factors, namely (i) the relative price of aluminium *vis-a-vis* other metals and (ii) the consumer preference. In a country like India where the prospects of production of other non-ferrous metals are not good, the demand for aluminium will have to be encouraged by making aluminium relatively cheaper and also by limiting the uses of copper and other non-ferrous metals to those purposes for which aluminium cannot be a substitute.

7.2. In our last Report we had estimated the demand for aluminium for 1958 at 35,000 tons and expected it to increase to 44,000 tons by 1961. In connection with the present inquiry we have received estimates of demand from various quarters. The Development Wing estimates the demand for 1961 and 1966 at 50,000 tons and 100,000 tons respectively. Of the two producers of virgin metal, Indian Aluminium Co. estimates the demand for 1960-61 at 44,000 tons and that for 1965-66 at 64,000 tons. Aluminium Corporation's estimates are 40,000 tons for 1960 and 56,000 tons for 1963. The annual average rate of growth indicated in these three estimates is 10,000 tons in the case of the first and 4,000 to 5,000 tons in the case of the other two. We have received several other estimates from rollers, fabricators, consumers etc. which disclose equally wide disparities.

7.3. We give below the break-down of the above mentioned three estimates :

(In tons)

	Develop- ment Wing	Indian Alumi- nium Company	Alumi- nium Corpo- ration	Develop- ment Wing	Indian Alumi- nium Company	Alumini- um Cor- poration
	1961	1960-61	1960	1966	1965-66	1963
Utensils . . . . .	11,500	10,000	10,000	20,000	13,000*	10,000
A.C.S.R. & A.A.C. . .	20,000	18,000	15,000	35,000	22,000†	22,000
Transportation . . .	8,000	6,000	6,500	15,000	12,000	9,000
Building and construction .	3,000	2,000	2,000	5,000	3,000	3,000
Food and farming . . .	1,000	4,000	2,400	2,500	9,000	3,500
Canning and packaging . .	4,000			7,500		
Miscellaneous . . . . .	2,500	4,000	4,100	5,000	5,000	8,500
Export . . . . .				10,000	..	..
TOTAL . . . . .	50,000	44,000	40,000	1,00,000	64,000	56,000

\*Excluding 10,000 tons scrap for consumption for utensil industry.

†Likely to go up to 40,000 tons according to Plan target of power development.

These and other estimates were discussed in detail at the public inquiry. For the current year 1960, the demand was examined under each sub-head separately and representatives of different interests present at the inquiry agreed generally on the following estimates :

	1960	1963
	Tons	Tons
Utensils . . . . .	11,000	16,000
A.C.S.R. and A.A.C. . . . .	16,000	27,000
Transportation and aluminium alloys . . . . .	7,000	11,500
Building and construction . . . . .	3,000	5,000
Food and farming . . . . .	1,000	2,500
Canning and packaging . . . . .	3,000	6,000
Miscellaneous . . . . .	4,000	6,000
TOTAL . . . . .	45,000	74,000

The estimate under utensils excludes those which are fabricated out of scrap. It was noted that the consumption of virgin metal for this purpose is restricted largely because of its unavailability and that aluminium always holds a material advantage in price over stainless steel and brass. The estimates under other heads are close to those of the two main producers and were endorsed generally by trade-interests and other representatives present at the inquiry.

7.4. The estimate of 45,000 tons for the year 1960 will be seen to agree broadly with the trend of actual availability during last three years. The figures are cited below :—

(In tons)

	Sales of indigenous ingots	Import of ingots sheets etc.	Imports of scrap	Import of A.A.C. and Aluminium content in imported A.C.S.R.*	Total
1957 . . . .	7,068	21,391	1,815	3,900	34,174
1958 . . . .	8,484	19,163	126	1,269	29,042
1959 . . . .	16,040	19,011	..	3,341	38,392

\*2/3rds of weight of A. C. S. R. is taken as equivalent to aluminium content.

A comparison of the consumption of 1958 and 1959 clearly indicates the capacity of the country to absorb substantial increases in production of aluminium.

7.5. As for the trend in demand over the next three years, it was generally felt that the demand under utensils from the poorer sections of society is held down artificially by lack of metal and should expand with rising incomes and availability of metal. The requirements for conductor wires should also grow apace with the materialisation of electricity schemes under the Third Five Year Plan. As a matter of fact, the Plan aims at raising the generation of electricity from 5.8 million k.w. to 11.8 million k.w. over the five year period. There are also other important factors which may be expected to place aluminium only next in importance to iron and steel in our plans of the immediate future. Our requirements of non-ferrous metals over the next five years are likely to be massive. Among non-ferrous metals, aluminium holds a crucial place for this country since the raw materials for aluminium are available within the country in far greater abundance than in the case of others; secondly, its use offers a material price advantage over that of others like copper and brass; and thirdly its import on account of the same price factor is more economic of foreign exchange. We are informed that even in advanced countries like the U. S. A. which have ample deposits of copper the use of aluminium accounts for 10 per cent of the use of all non-ferrous metals. It was also brought to our notice that in countries like France which lack deposits of copper etc. compulsory steps have been taken to enforce the use of aluminium



wherever possible. It appears reasonable to assume that the compulsion of economic facts will impel this country also in the same direction. For these and other reasons, the consensus of opinion at the public inquiry was that the demand in 1963 as indicated above would aggregate to 74,000 tons.

8.1. The main raw materials required for the manufacture of aluminium ingots are bauxite or alumina (pure aluminium oxide), caustic soda, petroleum coke, soft pitch, cryolite, aluminium fluoride and fluorspar. The position in regard to these materials is stated below.

8.2. India has wide-spread deposits of bauxite, the most abundant deposits being in Bihar, Madhya Pradesh, Maharashtra and Madras. At present only the Lohardaga area of Bihar is being exploited by the existing producers. The main difficulty in regard to the exploitation of other areas is lack of adequate communications and transport facilities. It was urged at the public inquiry that the State Governments should follow a definite policy of reserving bauxite deposits for exploitation by aluminium producers. Unless fresh areas are developed competition for existing deposits in areas with satisfactory communications will push up the cost of bauxite to uneconomic levels. Both Indian Aluminium Company and Aluminium Corporation have their own alumina plant for processing bauxite to obtain pure aluminium oxide for smelting. The alumina capacity of the plant of Aluminium Company at Muri in Bihar is only 20,000 tons a year which is not sufficient for its current production of aluminium. The Company has, however, obtained a licence to expand its capacity to 54,000 tons a year which will take care of its requirements of alumina for the additional smelter capacity of 10,000 tons to be installed by the end of 1961. The capacity of the alumina plant of the Corporation is only 4,400 tons. It will also have to increase the capacity of its alumina plant when its ingot capacity is increased to 7,500 tons a year. The industry is at present allowed to import alumina at the concessional rates of duty of 20 per cent *ad valorem* standard and 10 per cent *ad valorem* preferential. This concession is due to expire on 31st October 1960. Both the Company and the Corporation have requested the extension of the concession for a further period as they envisage a time-lag between the installation of the additional smelter capacity and the expansion of the alumina plant. We deal with this subject later in the Report.

8.3. At present Aluminium Company's entire requirements of alumina for the Alupuram plant are met through imports. The Company has stated that its smelter at Alupuram will be placed at a disadvantage when it starts drawing supplies of alumina from Muri as the freight concession allowed to it on the transport of alumina has been withdrawn with effect from 1st January 1960. The actual incidence of the increased freight rate on alumina will work out to Rs. 264 per ton of ingot as against Rs. 172 per ton when the Company enjoyed the freight concession. The Company has pointed out that the revised freight rate on alumina is higher than that on steel billet, bloom and pig iron. As we have pointed out earlier, it is essential to keep the

price of aluminium as low as possible. The withdrawal of the freight concession on alumina will tend to increase the price of aluminium. This problem may arise in the case of new units also if the alumina plant is located at bauxite sites, distant from smelter. We, therefore, recommend that the Railway Board should consider whether alumina consigned to smelters could be classified in the same category as other beneficiated or crude ore for charging freight.

8.4. Caustic soda is produced in the country, but with the increasing claims on the domestic supplies from other industries, indigenous production is found to be inadequate to meet the demands of the aluminium industry. It was brought to our notice that the State Trading Corporation through which imports of caustic soda are effected has terminated its supplies to aluminium producers. This has put the industry to considerable hardship in the matter of price and availability. We would like to draw the attention of the Government to this complaint of the industry. Aluminium Company imports its entire requirements of petroleum coke. Aluminium Corporation was supplied its petroleum coke till now by the Assam Oil Company's Refinery at Digboi but the Refinery has informed the Corporation recently that it will not be in a position to continue the supplies in future. We are informed, however, that the two new refineries in the public sector are scheduled to adopt the process suited for production of petroleum coke and will be able shortly to offer the needed supplies to the industry. Soft pitch is available indigenously but the other important raw materials, namely, cryolite, aluminium fluoride and fluorspar have all to be imported.

8.5. The raw material for the manufacture of aluminium foils is foil-stock (or aluminium rolled strips in coils) which is mostly imported at present to the extent of 3000 tons per annum. Aluminium Company is also manufacturing foil-stock but its capacity is limited to small size coils. Its supply at present is about 720 tons of coil per annum. Aluminium Corporation has a project to manufacture its own foil-stock.

9.1. We had stated in our last Report that so far as primary producers of aluminium and rollers in the organised sector which includes the two primary producers, are concerned, the quality of their products was generally testified to be satisfactory. The consensus of opinion at the present inquiry was that the quality of the products of the primary producers continues to be satisfactory. Nevertheless some specific complaints still persist. A producer of fashion products complained that on account of insufficient purity, indigenous aluminium proves unsuitable for gold anodising. It was also alleged that container sheets suffer from streaks, pits and white stains which are not found in the imported material. It was stated by a representative of the plantation industry that hard tempered aluminium plain sheets lack the requisite degree of hard tempering and the quality of plain sheets and corrugated sheets has hardly improved. One consumer complained about indigenous foil on ground of incorrect gauge, stained or wrinkled edges, incorrect widths,

uneven brightness and improper degreasing. Indian Aluminium Company explained that its sales rejects do not exceed 0.25 per cent and has ascribed the complaints to damage in handling and improper storage and not to manufacturing defects. It is reported that all the raw materials and finished products are checked in its laboratories prior to use or sale. In fabricating operations, material is processed on a batchwise basis and complete batchwise history is maintained. Venesta Foils Ltd. has pointed out that complaints received by it relate to minute fraction of its output and arise sometimes out of damage in transit. Corrosion occurs on account of high chloride content of domestic paper and off-shade coloured foil is due to inexperience of machine operators which is being attended to. Packing errors are also responsible for some of the complaints. Aluminium Company, Aluminium Corporation and Venesta Foils have all statistical quality control in operation. Imperial Tobacco Co., India Pistons, Godfrey Phillips, Aluminium Industries, Hindusthan Aircraft, Director General of Supplies and Disposals, etc. have all expressed satisfaction with the quality of the domestic products.

9.2. The products of small fabricators in the unorganised sector show no improvement and the State Governments do not appear to have taken sufficient action to stop the manufacture of utensil from sub-standard material.

10.1. *I. S. I. specifications.*—At the time of the last inquiry, the Indian Standards Institution had prescribed 17 specifications of which 9 related to articles covered by the scheme of protection. Of these 9 specifications, three have been since revised. In addition to the nine specifications promulgated, 5 more specifications have now been published or revised. Considerable progress has been made by the Institution in regard to standards for testing aluminium and its alloys.

**I. S. I. specifications and Certification Marks**

10.2. *Certification Marks.*—Aluminium Company never joined the certification marking scheme although specifications were evolved by the Indian Standards Institution in consultation with it. Aluminium Corporation which held a licence to use I. S. I. certification mark on its 2S and 3S sheets withdrew from the scheme subsequently. The position of these two primary producers and rollers is that it is not necessary to insist on certification marks for intermediate products which are to be fabricated into final products like utensils and that in any case their products answer fully to the required standards and purity. The Corporation argues that the bulk of its supplies finds its way to Government which in any case holds its own inspection. Other three rollers, viz. Metal Rolling Works, Devidayal Metal Industries and Rashtriya Metal Industries hold licences to use certification marks. As we have indicated in our previous Reports, the main difficulty about utensils relates to small fabricators who do not use standard materials. The Ministry of Health, in consultation with the Central Food Standards, has recently made certain amendments to the Prevention of Food Adulteration Rules, 1955.

11.1. *Import control policy.*—For licensing of imports, aluminium and its manufactures are included in Serial **Import control policy and imports** Nos. 12, 13 and 17C of Part II of the Import Trade Control Schedule. The import control policy followed by Government from October 1958-March 1959 to-date in respect of these products is given below:

11.1.1. *Aluminium in any crude form, including ingots, bars, blocks, slabs, billets, shots and pellets—(Part II item 13 of the Import Trade Control Schedule).*

Since the licensing period October 1958-March 1959, established importers have not been granted any licences. Applications from actual users were considered on an *ad hoc* basis in consultation with the Development Wing. Both value and quantity were limited. Allocations for imports in favour of actual users were also made under the Colombo Plan during October 1958-March 1959 period. During the subsequent licensing periods allocations were also made in favour of scheduled industries under the Colombo Plan.

11.1.2. *Aluminium circles, sheets, strips (and other manufacture not otherwise specified) (Part II item 12 of the Import Trade Control Schedule).*

Since the licensing period October 1958-March 1959, no quota was granted to established importers. Applications from actual users for import of (i) sheets and strips thinner than 30 SWG; (ii) pipes and tubes 3" outside diameter and above; (iii) extruded sections; (iv) aluminium wire rods having a purity of 99.5 per cent or more for the manufacture of electrical conductors; and (v) aluminium electrodes were considered *ad hoc* in consultation with the Development Wing.

11.1.3. *Aluminium alloy items (other than those used in aircraft construction) containing more than 97% of aluminium in the form of plates, sheets, circles, strips, rods, bars, tubes, sections wires and rivets (Part II item 17C of the Import Trade Control Schedule).*

During the licensing period October 1958-March 1959, established importers were granted a quota of 20 per cent, General, and 20 per cent; Soft of one half of their best year's imports. The same policy was continued during the subsequent licensing periods including the current half year October 1960-March 1961. Applications from actual users were considered on an *ad hoc* basis from the licensing period April-September 1959.

11.2. *Imports.*—A statement showing imports of aluminium and its manufactures by countries of origin during 1957, 1958, 1959 and January-June 1960 is given in Appendix IV. A summary of the statement is given on the next page. The total imports of aluminium in all forms were 21,391.1 tons valued at Rs. 8.01 crores in 1957; 19,162.7 tons valued at Rs. 6.00 crores in 1958; 19,010.7 tons valued at Rs. 5.94 crores in 1959 and 11,424.8 tons valued at Rs. 3.62 crores during January-June 1960. The principal sources of supplies were Canada, Norway, U.S.A., U.S.S.R. and U.K.

Statement showing imports of aluminium and its manufactures during 1957, 1958, 1959 and 1960 (Jan.-June)

Name of the article	1957			1958			1959			1960 (Jan-June)		
	Quantity (Tons)	Value (Rs.)	Quantity (Tons)	Value (Rs.)	Quantity (Tons)	Value (Rs.)	Quantity (Tons)	Value (Rs.)	Quantity (Tons)	Value (Rs.)	Quantity (Tons)	Value (Rs.)
(A) Aluminium and Aluminium Alloys Unwrought—												
(i) Aluminium Base Alloy	8.55	82,857	65.50	1,84,919	62.65	1,74,983	6.70	70,747				
(ii) Aluminium ingots	5710.40	1,65,99,272	6824.75	1,72,43,145	6377.05	1,64,58,108	3757.15	94,70,262				
(iii) Others	37.60	35,342	224.50	5,75,424	166.25	4,37,623	19.10	2,21,001				
Total	5756.55	1,67,17,471	7114.75	1,80,03,488	6805.95	1,70,70,714	3782.95	97,62,010				
(B) Aluminium and Aluminium Alloys Worked Bars, Rods, Plates, Sheets, Wires, Pipes, Tubes, Castings and Forgings—												
(i) Bare Aluminium Wire Solid Hard Drawn.	22.75	1,35,174	2.35	21,270	1002.35	31,84,755	1100.30	32,99,181				
(ii) Bars and Rods	11615.50	4,33,66,397	9269.80	2,98,63,205	7187.00	2,18,48,149	4023.85	1,21,25,547				
(iii) Circles	1.25	84,558	Nil	Nil	159.85	5,53,254	105.80	3,33,135				
(iv) Foil Aluminium for teacheat Lining.	20.05	1,41,186	771.60	29,54,654	1599.90	62,32,054	1109.90	44,25,978				

(v) Foil and Leaf excluding Teachest Lining	627·25	45,58,985	76·90	6,31,365	24·60	3,27,306	25·85	2,40,035
(vi) Pipes and Tubes ·	140·25	11,12,658	31·55	2,57,449	78·15	4,75,920	125·05	7,11,155
(vii) Powder · · ·	131·95	5,63,857	69·85	3,37,257	171·35	7,97,289	53·55	2,58,058
(viii) Sheets, Plates and Strips	1849·00	87,35,212	1101·25	47,16,289	608·90	25,66,275	651·35	27,67,978
(ix) Wire N.E.S. · ·	553·00	19,09,068	99·75	3,75,913	8·50	61,047	15·30	1,45,762
(x) Others · · ·	673·50	27,53,167	624·85	28,15,976	1364·15	62,55,438	430·90	20,92,627
<b>TOTAL</b> ·	15634·50	6,33,60,262	12047·90	4,19,73,378	12204·75	4,23,01,487	7641·85	2,63,99,456
<b>GRAND TOTAL (A &amp; B) ·</b>	21391·05	8,00,77,733	19162·65	5,99,76,866	19010·70	5,93,72,201	11424·80	3,61,61,466

12. Exports of aluminium sheets, circles and utensils are allowed **Exports** freely but exports have been small and amounted to 501 cwts. valued at Rs. 1,95,212 in 1957; 277 cwts. valued at Rs. 1,21,629 in 1958; 215 cwts. valued at Rs. 1,12,408 in 1959; and 76 cwts. valued at Rs. 40,450 during January-June 1960. There has been a noticeable decline in export despite fiscal concessions and export facilities provided by Government. Under the provisions of the Customs and Central Excise Duties Export Drawback (General) Rules, 1960, the drawback of customs duty paid on imported raw materials and the rebate of central excise duty paid on excisable materials are allowed in respect of aluminium foil for tea chest lining exported out of India. The rate of drawback allowed is Rs. 35 per cwt. Under the Government's export promotion scheme licences for import of raw materials are granted to manufacturers borne on the list of the Development Wing, including the manufacturers of aluminium foils and aluminium semis (sheets, circles, strips, extrusion rods and tubes). Under this scheme licences will be granted on the recommendation of the Development Wing against exports effected in the preceding quarter on certain prescribed basis.

13. Aluminium and its manufactures are assessed to duty under item Nos. 66(a) and 66(1) of the First Schedule **Existing rates of duty.** to the Indian Tariff Act, 1934 the relevant extract from which is reproduced below :

Item No.	Name of the article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of		Duration of protective rates of duty
				The U.K.	A British Colony	
*66	Aluminium manufactures, the following namely— (a) Plates, sheets, circles, strips and foil, including foil in any form or size ordinarily used as parts and fittings of tea chest.	Protective.	35 percent <i>ad-valorem</i> <i>plus</i> the excise duty for the time being leviable on like articles if produced or manufactured in India, and where such duty is leviable at different rates, the highest duty.			December 31st, 1960.

Item No.	Name of the article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The U.K.	A British Colony	Burma	
*66(1)	Aluminium in any crude form, including ingots, bars, blocks, slabs, billets, shots and pellets.	Protective	35 percent <i>ad-volarem</i> plus the excise duty for the time being leviable on like article if produced or manufactured in India, and where such duty is leviable at different rates, the highest duty.				December 31st, 1960.

\*NOTE—Under the Finance Act, 1960, the excise duties leviable on indigenous production of aluminium in any crude form and a aluminium manufactures are:—

*Aluminium—*

- (a) In any crude form including ingots, bars, blocks, slabs, billets, shots and pellets. Rs. 200 per metric ton.
- (b) Manufactures, the following namely, plates sheets, circles, strips and foils in any form or size. Rs. 500 per metric ton.

14.1. As indicated earlier, far reaching changes are scheduled to take place in the capacity and range of production of both the primary producers by the end of 1963. It is not practicable now to take into account the changes in costs which will ensue as the expansion projects go into effect stage by stage. It was, therefore, decided that the future estimate of costs should be based on the capacity and processes as they exist at present. Secondly, we considered carefully whether for purposes of computation of quantum of protection both the Company and the Corporation should be accepted as the basis as was done in the past. With the recent expansion in the capacity of the Company the disparity in the capacity of the two units is such as to make their costs hardly comparable. Note has also to be taken of the fact that none of the new units which will be coming into existence during the next three years are planned for a capacity of less than 10,000 tons and some of them are planned to start with capacities of 20,000 tons and above. The expansion scheme of Aluminium Corporation does not aspire to attain a size above 7,500 tons.



In view of the changes which have already materialised and which will take place in the industry as a whole in the near future, it is clear that the Corporation has ceased to be a representative unit of the industry. We, therefore, decided that the Corporation should be excluded from the determination of the quantum of protection for the industry.

14.2. *Indian Aluminium Company Ltd.*—For the computation of actual costs, the accounts for the year ended 31st December 1959 were available and they were examined by our Cost Accounts Officer. We have discussed the data with the representatives of the Company and have framed our estimates for the future. As the Company desired that the details of its costs should be treated as confidential, we send the report of our Cost Accounts Officer as a separate enclosure to this Report.

14.2.1. *Alumina.*—The following statement gives the breakdown of the cost of production of alumina for 1957 and 1959 as well as our estimates for the future :—

	Actuals for 1957	Actuals for 1959	Commis- sion's estimate for future
Production of calcined alumina (tons)	14,060	19,641	20,000
	Rs. per ton	Rs. per ton	Rs. per ton
Raw materials . . . . .	124.66	125.08	130.78
Power and fuel . . . . .	74.39	79.24	85.92
Labour . . . . .	15.21	13.81	15.50
Repairs and maintenance and consumable stores	33.33	26.33	29.50
Establishment, other overheads, bags less credit and provision for gratuity.	71.03	56.48	69.05
Net cost of production without depreciation .	318.62	300.94	330.75
Add railway freight from Muri to Hirakud .	*	39.10	39.10
Cost of alumina at Hirakud . . . . .	..	340.04	369.85

\*In 1957, alumina was transported from Muri to Alupuram since Hirakud smelter was not then in operation.

The production of alumina in 1959 recorded a substantial increase and was almost equal to the rated capacity. This resulted in a fall in costs under the two sub-heads, (a) repairs, maintenance and consumable stores and (b) establishment, other overheads etc. The future cost of alumina as compared with the actuals of 1959 is expected to rise by about Rs. 30 per ton due to various causes such as higher royalty, increased freight on bauxite, annual increments to labour and staff and the higher costs of stores and spares.

### 14.2.2. Ingots.

14.2.2.1. The statement below gives broadly the breakdown of the cost of production of ingots for 1957 as given in our last Report, the actual cost for 1959 and our estimate for the future.

	Actuals for 1957	Actuals for year ended 31st December, 1959			Commission's esti- mates for future	
	Alu- puram	Alu- puram	Hira- kud	Alu- puram	Hira- kud	
Production in tons . . . . .	5,465	5,446	9,206	5,600	10,000	
	Rs. per ton	Rs. per ton	Rs. per ton	Rs. per ton	Rs. per ton	
Raw materials . . . . .	1132.57	1300.09	1157.07	1370.89	1101.51	
Power and fuel . . . . .	297.54	338.46	354.39	337.92	322.00	
Labour and establishment . . . . .	162.86	184.42	87.08	237.32	92.60	
Repairs, maintenance, consumable stores and Pot lining and starting up expenses.	116.67	144.06	209.65	151.32	92.58	
Other overheads less credit and gratuity Head office expenses . . . . .	44.85	23.14	56.30	23.85	51.71	
	190.84	119.16	147.09	139.29	135.00	
Total cost without depreciation . . . . .	1945.33	2109.33	2011.58	2260.59	1795.40	
Weighted average cost without depreciation.			2047.91	1962.39		

At Alupuram the actual works cost of ingots per ton has recorded an increase of Rs. 164 or 8 per cent as compared with that of 1957.

14.2.2.2. As regards future estimates the consumption of alumina and other raw materials at Alupuram was allowed at a reasonable level in the light of actual experience of previous years. As between Alupuram and Hirakud, it was found that the actual consumption of alumina and other raw materials at Hirakud for 1959 was somewhat higher and in view of the fact that the plant is still in its early stages of operation, higher allowances were made for Hirakud in the future estimates also. Although the actual consumption of electricity per ton was higher at Hirakud than at Alupuram, the allowance in future estimates for the former was slightly less than in the case of the latter in view of the much higher capacity and size of cells at Hirakud. At both centres, the life of pot-lining has been assumed at 1125 days. The head office expenses were allocated to Alupuram and Hirakud in the proportion of 26 per cent and 45 per cent respectively and the substantial fall in per ton cost is almost entirely due to expansion of output.

### 14.2.3. Sheets and circles.

The Company produced 10,258 tons of sheets and circles in 1959 as against 7,283 tons in 1957. An output of 10,000 tons has been assumed for our future estimates. The following table gives the broad breakdown of the costs of production of those sheets and circles for which corresponding c.i.f. prices are available.

*Statement showing ex-works costs of production without depreciation of aluminium sheets and circles for 1957 and 1959 and the Commission's estimates for the future.*

(Rs. per ton)

Items	Actuals for 1957			Actuals for 1959		Commission's estimate for future	
	Flat sheets, common alloy	Sheared circles		Flat sheets, common alloy	Punched circles	Flat sheets, common alloy	Punched circles
A. Cost of metal without depreciation	3,007.11*	3,007.11*		2,129.35	2,129.35	2,045.99	2,045.99
B. Add melting loss	91.27	98.16		51.61	51.61	55.78	55.78
1. Total metal cost	3,098.38	3,105.27		2,180.96	2,180.96	2,101.77	2,101.77
2. Remelting cost	238.49	256.49		248.71	248.71	268.78	268.78
3. Rolling cost	563.64	409.91		635.82	551.71	684.46	593.92
4. Inspection	15.29	15.29		17.17	17.17	19.60	19.60
5. Packing and shipping	130.18	130.18		145.00	91.00	155.00	98.00
6. Head office overheads	81.36	81.36		63.26	63.26	72.00	72.00
7. Total cost	4,127.34	3,998.50		3,290.92	3,152.81	3,301.61	3,154.07
8. Less gratuity	..	..		19.15	19.15	21.07	21.07
9. Net cost of production without depreciation	4,127.34	3,998.50		3,271.77	3,133.66	3,280.54	3,133.00

\*This is the average price of ingot based on the Company's own production and imports (1300 tons) of ingots and purchases of scrap, and includes depreciation and profits on Company's own ingots.

14.3.1. *Fair ex-works prices.*—To arrive at fair prices, depreciation, an allowance for contingencies and margin for profit have to be added. The Company is providing depreciation at different rates on different assets on straight line basis. In a capital intensive industry like aluminium, it is desirable to provide depreciation on the straight line basis to maintain stable prices over a period. In the present case, however, we have provided depreciation at normal income-tax rates on the written down values as the difference in the total cost in the case of the Company will not be significant at the moment even if depreciation is provided on straight line basis. However, we are examining the general issue in more detail. In the meantime we suggest that new units coming into production in this industry should from the start maintain plant registers in sufficient detail to work out depreciation on the straight line method. A contingency margin of 5 per cent has been allowed on works costs without depreciation. A return of 12 per cent has been allowed on employed capital in which working capital has been taken as equivalent to 8 months' cost of production. The following table shows the future fair ex-works prices of ingots, sheets and circles arrived at on the above basis.

Items	(per ton)		
	Ingots	Common alloy flat sheets	Punched circles
	Rs.	Rs.	Rs.
1. Cost without depreciation	1962.39	3280.54	3133.00
2. Depreciation	343.27	453.42	421.42
3. Margin for contingency	98.12	164.03	156.65
4. Return	559.23	749.04	737.24
TOTAL	2963.01	4647.03	4448.31

14.3.2. It is important to bear in mind that the fair ex-works price computed above is for the purpose of arriving at the quantum of protection. It does not include selling and distribution expenses and, therefore, cannot be taken as the fair price at which the product should be available to the consumer.

15. The data regarding c.i.f. prices and landed costs of aluminium ingots and semi-manufactures furnished by the Collector of Customs, Madras, primary producers and importers as well as f.o.b. quotations furnished by the High Commission of India in the U.K. and the Embassy of India in West Germany are given in Appendix V. These prices were discussed at the public inquiry and we have adopted the following c.i.f. prices for computing the disadvantage, if any, suffered by the domestic industry *vis-a-vis* imports.

Name of commodity	C. i. f. price	Source of imports
	Rs. per ton	
1. Virgin aluminium ingot 99.5% minimum purity . . .	2,489.0	Canada
2. Aluminium flat sheets (2S, 99% minimum purity half-hard temper 20 SWG $\times$ 3' $\times$ 8').	4,928.0	U.K.
3. Aluminium circles (2S, 99% minimum purity, soft temper 20 SWG $\times$ 6' $\times$ 18").	5,219.2	U.K.

16. The following table shows the comparison between the future fair ex-works prices of domestic aluminium ingots, sheets and circles and c.i.f. prices and landed costs of the corresponding imported products.

	Rs. per ton		
	Ingots	Sheets	Circles
	1	2	3
1. C. i. f. price . . . . .	2489.00	4928.00	5219.20
2. Clearing charges @ 1% . . . . .	24.89	49.28	52.19
3. Landed cost ex-duty . . . . .	2513.89	4977.28	5271.39
4. Fair ex-works price . . . . .	2963.01	4647.03	4448.31
5. Difference between fair ex-works price and landed cost ex-duty (4—3) . . . . .	449.12	(—)330.25	(—)823.08
6. Difference as a percentage on c.i.f. . . . .	18.04	(—)6.70	(—)15.77

17. It will be observed from the comparison given in the preceding paragraph that while no duty is required to protect indigenous sheets and circles, a duty of 18.04 per cent is required to equate the domestic ex-works price of ingots with the landed cost ex-duty of the imported product. The existing effective rate of import duty is 35 per cent *ad valorem*. Although during the period of protection the industry has recorded some progress and has diversified its products, it is still in a developmental stage and various schemes for expansion of the existing units and establishment of new units have been taken in hand. It will take another three to five years to complete these expansion schemes and protection during this period would be necessary

to stimulate further efforts. For this purpose we consider that a slightly higher rate of import duty than that indicated by the above comparison would be desirable. We, therefore, recommend that protection granted to ingots, bars, etc. covered by I. C. T. item No. 66(1) should be continued for a further period of four years, *i.e.*, till 31st December 1964 but the rate of protective duty should be reduced to 25 per cent *ad valorem*. In making this recommendation we have taken note of the present excise duty on domestic ingots and the countervailing duty on imported ingots as well as the need to keep the prices of a basic raw material like aluminium as low as possible. As regards sheets, circles, etc. they would need compensatory protection so long as the raw material, namely, ingots, bars, etc. is in the protected category. We, therefore, recommend that protection to the products covered by I. C. T. item No. 66(a) should be continued upto 31st December 1964 at the same rate of duty as that recommended for ingots, *i.e.*, 25 per cent *ad valorem*.

18.1. *Selling system*.—The selling system adopted by the manufacturing system and selling factors is briefly described below—  
prices.

18.1.1. *Indian Aluminium Company*.—The Company has branch sales offices in Bombay, Calcutta, Delhi and Madras and salesmen attached to these offices contact customers in their respective territories and book orders from them. Sales thus effected direct to consumers account for about 98 per cent of the total sales. The Company has no uniform system of distributorship for its products but when circumstances warrant, it appoints stockists or distributors with a view to promote sales or help petty consumers requiring small quantities which the Company finds uneconomical to manufacture and supply separately. The stockists/distributors are appointed on non-exclusive basis and are allowed discount upto 3 per cent. The Company manufactures rolled products against orders while ingots are supplied ex-stock.

18.1.2. *Aluminium Corporation of India*.—The Corporation has a sole selling agent, J. K. Alloys Ltd., for its products and the latter has sub-agents and distributors in most of the principal cities in India. It has a distributor in South India and another in West Bengal and Bihar for circles only and a distributing office at Delhi. The distributor in South India has offices in Bangalore, Hyderabad, Madras and Madurai. Prices are fixed by the Corporation and orders are booked by the sole selling agent and distributors at those prices subject to the approval of the Corporation. Discounts and commissions are allowed at the following rates :

*Sole selling agent*.— $1\frac{1}{2}$  per cent commission on sales of virgin and alloy aluminium ingots and  $2\frac{1}{2}$  per cent commission on sales of flat and corrugated sheets and circles.

*Distributors*.— $1\frac{1}{4}$  per cent cash discount to distributors of circles in Calcutta, West Bengal and Bihar;  $1\frac{1}{4}$  per cent trade rebate on sales of sheets and circles and  $1/4$  per cent on sales of virgin and alloy aluminium ingots to the distributors in South India

*Customers.*— $2\frac{1}{2}$  per cent trade rebate to customers who lift a minimum quantity of 50 tons of aluminium sheets a year.

The Corporation claims that special liaison is maintained by its sales staff with customers at all levels and sales are effected to consumers direct as far as possible. Its metallurgists and sales engineers contact consumers regularly to attend to their technical problems. Technical service is offered free of cost as and when required by consumers. As regards Government tenders, the Corporation deals with them direct but the distributors maintain contacts with the concerned departments regarding delivery, payment, etc. As in the case of the Company, the Corporation manufactures sheets, circles or casting alloys only against orders from consumers.

18.1.3. *Other rollers.*—Metal Rolling Works Private Ltd. manufactures sheets and circles on a conversion basis out of metal supplied by Lallubhai Amichand Private Ltd. It also accepts a few orders from other utensile manufacturers. Devidayal Metal Industries Private Ltd. sells its products through selling agents who are paid a commission of 1 per cent on sales effected by them. Rashtriya Metal Industries Ltd. sells its products direct to consumers. The entire production of sheets and circles by Popular Metal Works and Rolling Mills is consumed by itself in the manufacture of utensils. The products of Mysore Premier Metal Factory are sold to Jeewanlal (1929) Ltd. which uses them partly for its own consumption and partly for sale to outsiders. Venesta Foils Ltd. markets its entire production of foils and container sheets through Indian Aluminium Co. Ltd. and foils for tea-chest lining through Williamson Magor and Co. Ltd. These agents are paid commission on the invoice value at  $3\frac{1}{2}$  per cent and 3 per cent respectively.

18.2. *Selling prices.*—Both Indian Aluminium Company and Aluminium Corporation have not changed their prices during the last three years. They claim to fix selling prices taking into consideration their cost of manufacture, distribution etc. The current list prices furnished to us by the two producers as well as by other firms are given in Appendix VI.

18.3. Most of the consumers have represented that prices of the domestic products are high and that the interests of stimulating their consumption and developing consuming industries ways and means should be explored for reducing their prices. We discussed the issue at length at the public inquiry. The general view of the consumers was that the manufacturers should strive to effect economies in their cost of production. The consumers also expressed apprehension that the excise duties on domestic products and countervailing duties on imports would inhibit the growth and development of consuming industries. They, therefore, pleaded that these recent levies should be either abolished or considerably reduced. Apart from these general statements none of the consumers has specified the extent to which the price of aluminium should be reduced. It needs to be emphasised that a mere price reduction

by itself will not lead to increased consumption unless there is a substantial improvement in the supply of the metal as well. We have, however, taken note of the suggestion for reduction in the excise and countervailing duties while formulating our scheme of protection to the industry. As with the installation of additional capacities already licensed there will be increasing supplies from indigenous sources and further every protected industry is under an obligation to strive continuously to afford relief to consumers by economising in the cost of manufacture, we have considered the steps required to be adopted in the matter. The representatives of manufacturers expressed the view that an appreciable reduction in the manufacturing cost can be expected from a combination of the following measures :

- (i) increase in the existing ingot capacity of individual manufacturers ;
- (ii) reduction in the cost of power and supply of adequate power to meet the expanding capacity of the industry ; and
- (iii) improved transport facilities and reduction in freight rates on raw materials.

18.3.1. In regard to the first point, it was stated that in foreign competing countries the minimum capacity of smelters is 50,000 tons a year while the capacity of the indigenous units is far below this level. It was, therefore, suggested that primary producers should be encouraged to step up their capacity. In view of the obvious economies resulting from expanded production we suggest that Government should bear this in mind while licensing new units for the manufacture of aluminium ingots.

18.3.2. In regard to the second point, it was contended that aluminium is a power-intensive industry inasmuch as about 22,000 KWH is required to produce one ton of ingot. Therefore the cost of power is a major element and an increase of 1 naya Paisa per K.W.H. would inflate the cost of production of ingot by Rs. 220 per ton. It was represented that the greatest disadvantage of the domestic industry is that it has to pay twice or thrice the power rates prevalent in foreign countries like Norway and Canada. The present rate for supply of power in India was stated to be as high as Rs. 165 per KW year, the incidence of which per ton of ingot is about Rs. 415. Another disadvantage of the industry was stated to be that Electricity Boards are usually reluctant to enter into long-term agreements with the manufacturers for supply of power at a fixed rate in view of the lack of flexibility in the matter of distribution of power to such large scale consumers and in certain cases even after the agreements were signed manufacturers were subsequently called upon to pay higher charges for power supply. The manufacturers pleaded that as they consumed large blocks of power the State Governments and Electricity Boards should be persuaded to supply power at concessional rates and also to maintain their power rates stable for a fairly long period so that they may properly plan their cost of manufacture. It would appear that as the Electricity Boards have to balance their budgets, there is generally stout opposition to supply power to the industry at a concessional rate as it would be



tantamount to grant of subsidy to it at the expense of other consumers. We have given our careful thought to the various issues involved and on a balance of considerations have come to the conclusion that to enable the industry to keep its cost under control and to effect economies wherever possible it is essential (i) to maintain power rates stable for a fairly long period and (ii) to supply adequate power to meet the growing needs of the industry at reasonable rates.

18.3.3. In regard to the third point it was stated that the existing freight rates on raw materials constitute a significant element in the cost of raw materials particularly in the case of Aluminium Company whose units for historical reasons are located in different parts of the country—alumina plant at Muri, smelter at Hirakud and Alwaye and rolling mills at Belur. The representative of the Company pointed out that the concessional freight rates of Rs. 6.26 per ton of bauxite transported from Lohardaga to Muri and of Rs. 86 per ton of alumina transported from Muri to Alwaye were withdrawn from 1st January 1960. The total incidence of the current freight rates on movement of bauxite and alumina was stated to be about Rs. 314 per ton of aluminium ingot. The Company, therefore, requested that the concessional freight rates enjoyed by it till January 1960 should be restored. Aluminium Corporation also has contended that the current freight rates on raw materials are high and pleaded for their reduction. We have commented upon the freight rate on alumina in paragraph 8.3. The complaint of the Corporation that the freight rates on raw materials are high is too general a statement to offer any comments. If the industry has any specific complaint, the matter should be placed before the Railway authorities for their favourable consideration.

19.1. The present position in regard to supply of alumina is stated in paragraph 8.2. Although there are extensive bauxite deposits in different parts of the country, most of them have not been proved so far and further they are located in the interior far away from power projects and are not connected by railway to facilitate transportation of bauxite. At present the aluminium manufacturer produces the bulk of alumina required by his smelter and if his own production is not adequate, he is allowed to import the balance of his requirements at a concessional rate of duty. We have observed in paragraph 6.3.4. that by 1963 the domestic ingot capacity will increase to 83,100 tons and if the industry has to be independent of imports the indigenous alumina capacity will have to be stepped up from the present level of 24,400 tons to about 170,000 tons a year. As dependence on imports for the raw material is not conducive to the stability of the industry and further as the demand for aluminium is growing rapidly, it is necessary to instal the requisite additional capacity for alumina to ensure the establishment of the aluminium industry on a sound footing. For this purpose as well as for the purpose of ensuring that the volume of imports and the period for which imports of the material are necessary are curtailed to the minimum it would be necessary that the Development Wing should keep a close watch on the steps taken by the units to set up alumina plants. Still a time-lag is likely to arise in most cases between the

**Concessional duty on alumina.**

establishment of the smelter and the alumina plant and in such cases imports of alumina will have to be allowed to secure full utilisation of the domestic smelter capacity.

19.2. We have examined the fair ex-works price of alumina manufactured by Indian Aluminium Company. The actual ex-works cost of production without depreciation and return on capital for 1959 works out to Rs. 300·94 per ton and the estimate for the future to Rs. 330·75 per ton. After providing for depreciation, return on capital and margin for contingency on the same lines as in the case of ingot, we have computed the future fair ex-works price of alumina at Rs. 460·14 per ton. As against this, the latest c.i.f. price of imported alumina furnished to us by Indian Aluminium Company is Rs. 465 per ton. Even at the concessional rate, the incidence of the duty on alumina is Rs. 186 per ton of ingot manufactured out of imported raw material and if the concession is withdrawn the burden will increase by 100 per cent. We are of the view that withdrawal of the concessional duty at this stage will not be desirable for various reasons. Firstly, imported alumina is already expensive enough and should not be made more expensive by the withdrawal of the concession. Secondly, any increase in the price of alumina will inflate the cost of production of the metal. The importance of the aluminium industry to the national economy has already been stressed by the Tariff Board in its 1951 Report and need not be repeated here. Among the non-ferrous metals aluminium is the only metal which can be developed as a major industry in the country and it offers vast scope for substitution of other non-ferrous metals in which the country is deficient. Therefore, the price of the metal should be maintained at the lowest possible level. Bearing this in mind we have recommended that the protective duty on aluminium should be reduced to 25 per cent *ad valorem* and in our assessment of the disadvantage suffered by the industry *vis-a-vis* imports, we have taken note of the existing concessional duty on the material. Thirdly, the disadvantage to the domestic industry *vis-a-vis* the imported aluminium is worked out on the basis of the combined costs of the Company's Hirakud and Alupuram plants, of which the former works on domestic alumina. The disadvantage to the industry would be much larger if any smelter is to work on imported alumina alone. For these reasons and having regard to the development of the industry during the next three years, we recommend that the existing concessional duty of 20 per cent *ad valorem* (standard) and 10 per cent *ad valorem* (preferential) on imports of alumina should be continued upto 31st December 1964.

20. Our conclusions and recommendations may be summarised

**Summary of conclusions and recommendations** as under :—

(i) Indian Aluminium Co. Ltd. and Aluminium Corporation of India Ltd. continue to be the only two manufacturers of aluminium ingots in the country. Their rated capacity at present for the manufacture of the primary metal is 17,900 tons a year. With the installation of additional capacity already licensed, the domestic capacity is

expected to increase to 83,100 tons by the end of 1963. The indigenous output of aluminium ingot was 8,134 tons in 1958, 17,114 tons in 1959 and 7,387 tons during January-May 1960.

[Paragraph 6.3]

(ii) There are eleven units (including the two primary producers registered with the Development Wing for the manufacture of aluminium sheets and circles. The present aggregate capacity of nine of these units on three shift basis is 19,000 tons. The production of aluminium sheets and circles was 13,958 tons in 1958, 16,206 tons in 1959 and 6,324 tons during January-May 1960.

[Paragraph 6.5]

(iii) Venesta Foils Ltd. is the only unit manufacturing foil and container sheets in the country. Its present licenced capacity is 3,200 tons while its production was 1,864 tons in 1958, 2,429 tons in 1959 and 1,342 tons during January-May 1960.

[Paragraph 6.6]

(iv) The current domestic demand for aluminium is estimated at 45,000 tons and it is expected to increase to 74,000 tons by 1963.

[Paragraphs 7.3 and 7.4]

(v) The Railway Board should consider whether alumina consigned to smelters could be classified in the same category as other beneficiated or crude ore for charging freight.

[Paragraph 8.3]

(vi) The quality of the products of the primary producers continues to be satisfactory, but the products of the small fabricators in the un-organised sector show no improvement.

[Paragraph 9]

(vii) Protection granted to aluminium ingots, bars etc. covered by I. C. T. item No. 66(1) and aluminium manufactures covered by I. C. T. item No. 66(a) should be continued for a further period of four years ending 31st December 1964 but the rate of protective duty should be reduced to 25 per cent *ad valorem*.

[Paragraph 17]

(viii) To enable the industry to keep its cost of production under control and to effect economies wherever possible it is essential (i) to maintain rates for supply of electric power stable for a fairly long period and (ii) to supply adequate power to meet the growing needs of the industry at reasonable rates.

[Paragraph 18.3.2]

(ix) The existing concessional rates of duty of 20 per cent *ad valorem* standard and 10 per cent *ad valorem*, preferential on imports of alumina by the aluminium manufacturers should be continued upto 31st December 1964.

[Paragraph 19.2]

21. We wish to express our thanks to the manufacturers, importers and consumers who furnished us with valuable information in connection with this inquiry and whose representatives gave evidence before us.

**Acknowledgements**

K. R. P. AIYANGAR,

*Chairman.*

S. K. MURANJAN,

*Member.*

J. N. DUTTA,

*Member.*

R. S. BHATT,

*Member.*



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RAMA VARMA,

*Secretary.*

BOMBAY,

*Dated 14th October, 1960.*



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## APPENDIX I

(Vide Paragraph 3.1)

*List of firms, bodies and Government Departments to whom the Commission's questionnaires and letters were issued and from whom replies were received*

\*Indicates those who replied.

†Indicates those who are not interested.

### PRODUCERS :

- \*1. Indian Aluminium Company Ltd., 31, Chowringhee Road, Calcutta-16.
- \*2. Aluminium Corporation of India Ltd., 7, Council House Street, Calcutta-1.
- \*3. Venesta Foils Ltd., Kamarhati, 24, Parganas, (W. Bengal).
- \*4. Rashtriya Metal Industries Ltd., Kurla Road, P. O. J. B. Nagar, Andheri, Bombay-59.
- \*5. Mysore Premier Metal Factory, 124, Mint Street, Madras-1.
- \*6. Devidayal Metal Industries (Private) Ltd., P. O. Box No. 6215, Gupta Mills Estate, Bombay-10.
- \*7. Metal Rolling Works Private Ltd., 104, Sion-Matunga Estate, Sion, Bombay-22.
- \*8. Popular Metal Works & Rolling Mills, Sion, Bombay-22.
- \*9. Hindusthan Aluminium Corporation Ltd., Industry House, 159, Churchgate Reclamation, Bombay-1.
10. Tendulkar Industries (Private) Ltd., Stadium House, Veer Nariman Road, Churchgate, Bombay-1.
- \*11. Diwan Shah & Sons Private Ltd., Jagadhri (Punjab).
- \*12. Sardar Aluminium Factory, G. T. Road, Shahdara, Delhi.
- \*13. Madras Aluminium Ltd., C/o. Harshadray Private Ltd., Advani Chambers, 1st Floor, Sir P. M. Road, Fort, Bombay-1.
14. Hooseni Metal Rolling Mill Private Ltd., Atlas Mill Compound, Reay Road, Bombay-10.
15. N. M. Metal Industries, 20, Dadiseth Agiare Lane, Bombay-2.
16. Shree Bhagwan Metal Rolling Mill, Govind Nagar, Chinchali Rly. Gate, Malad East, Bombay-64.
- \*17. Eastern Smelting & Rolling Mill, Old Agra Road, Near New Kurla Mills, Kurla, Bombay-37.

18. Bombay Metal Industries, 61-C, Currey Road, Bombay-13.
19. Agrawal Metal Works Private Ltd., Rewari.
20. Sri Mahesh Metal Works, Madanganj, Kishangarh.
21. Vummidiar Mfg. (Private) Ltd., 162, Mount Road, Madras.

#### PRODUCERS' ASSOCIATION :

\*The Secretary, Indian Non-Ferrous Metals Manufacturers' Association,  
India Exchange, India Exchange Place, Calcutta-1.

#### IMPORTERS :

- \*1 Aluminium Hindustan Private Ltd., 2, Jessore Road, Dumdum, Calcutta-28.
- \*2. Alcan Asia Limited, 41, Chowringhee Road, Calcutta-16.
- †3. Imperial Chemical Industries (India) Private Ltd., I.C.I. House, 34, Chowringhee, Calcutta-1.
- \*4. Jeewanlal (1929) Ltd., 31, Netaji Subhash Road, Calcutta.
- \*5. Lallubhai Amichand Private Ltd., 225/7, Tardeo Road, Bombay-7.

#### CONSUMERS :

- \*1. Jeewanlal (1929) Ltd., 31, Netaji Subhas Road, Calcutta-1.
2. Lallubhai Amichand Ltd., 225/7, Tardeo Road, Bombay-7.
- \*3. Aluminium Industries Ltd., Kundara, (Kerala State).
- \*4. Electrical Manufacturing Co. Ltd., 136, Jessore Road, Calcutta-28.
- \*5. Indian Cable Co. Ltd., 9, Hare Street, Calcutta-1.
- †6. National Insulated Cable Co. of India Ltd., NICCO House, Hare Street, Calcutta-1.
- †7. Ashok Leyland Ltd., Ennore, Madras.
- \*8. Hindustan Aircraft Ltd., Hindustan Aircraft, P. O., Bangalore.
9. Hindusthan Motors Ltd., 8, India Exchange Place, Calcutta.
- \*10. Controller of Stores, North Eastern Railway, Gorakhpur.
- \*11. General Manager, Southern Railway, Headquarters Office (Stores Branch), Aynavaram (Perambur), Madras-23.
- \*12. Controller of Stores, Western Railway, Churchgate, Bombay-1.
- \*13. Alu Capsules Private Ltd., I. C. House, Dougall Road, Ballard Estate, Bombay-1.
- \*14. Godfrey Phillips India Ltd., Chakala, Andheri, Bombay-58.
- \*15. Golden Tobacco Co. Private Ltd., Tobacco House, Vile Parle, Bombay-57.

- \*16. Imperial Tobacco Co. of India Ltd., Virginia House, 37, Chowringhee, Calcutta-16.
- \*17. Lipton (India) Ltd., 9, Western Street, Calcutta-13.
- 18. Teachest & Plywood Traders Assn., P-11, Mission Row Extension, Calcutta.
- 19. Indian Galvanising Co., Ltd., 21, Netaji Subhas Road, Calcutta-1.
- 20. Hyderabad Allwyn Metal Works Ltd., Sanatnagar, Hyderabad-16.
- \*21. James Warren & Co. Ltd., 31, Chowringhee Road, Calcutta-16.
- \*22. Metal Box Co. of India Ltd., Barlow House, Chowringhee, Calcutta-20.
- \*23. Jay Engineering Works Ltd., Post Box No. 2158, Calcutta.
- \*24. Zenith Tin Works Private Ltd., Clerk Road, Mahalaxmi, Bombay-11.
- \*25. Textool Company Ltd., Ganapathy, P. O., Coimbatore-6.
- †26. National Rayon Corporation Ltd., Ewart House, Bruce Street, Bombay.
- \*27. Tata Iron and Steel Co. Ltd., Bombay House, 24, Bruce Street, Fort, Bombay-1.
- \*28. Textile Machinery Corporation Ltd., Belgharia, 24, Parganas (W. Bengal).
- \*29. S. A. Ramajayam & Bros., 3/488, Mint Street, Madras-3.
- \*30. V. Gopalakrishna Chettiar & Co., 39, East Chitrai Street, Madurai-1.
- \*31. India Pistons (Private) Ltd., Huzur Gardens, Sembiam, Madras.
- \*32. All India Non-Ferrous Metalware Manufacturers' Association, Liberty Building, Marine Lines, Bombay-1.
- 33. India Aluminium Products, P-11, Howrah Bridge Approach Road, Calcutta-1.
- 34. Narsidas Morarji, Utensils Merchant, Porbandar.
- 35. Greentose Corporation (India), 37, Strand Road, P. O. Box No. 713, Calcutta-1.
- \*36. Power Cables Private Ltd., Post Box No. 4, Kalyan.
- \*37. Indian Smelting & Refining Co. Ltd., Industry House, 159, Churchgate Reclamation, Bombay-1.
- \*38. V. Nagamanickam, 8, Muniyappan Covil Street, Gugai, Salem-1.
- \*39. Light Metal Works, New Sun Mill Compound, Delisle Road, Bombay-13.
- 40. The Chief Mechanical Engineer, U. P. Govt. Roadways Central Workshop, Kanpur.
- 41. Southern India Metal Distributors Assn., 127, Mint Street, Madras.



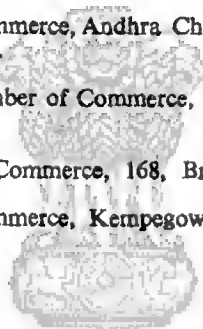
## GOVERNMENT DEPARTMENTS :

- \*1. Senior Industrial Adviser (Engineering) Development Wing., Ministry of Commerce & Industry, Udyog Bhavan, New Delhi.
- \*2. Director, Indian Standards Institution, Manak Bhavan, 9, Mathura Road New Delhi-1.
- \*3. Director of Co-ordination & Statistics, Directorate General of Supplies & Disposals, N. I. Building, Parliament Street, New Delhi.
- \*4. The Development Commissioner, Small Scale Industries, Shahjehan Road, New Delhi-1.
- \*5. Director of Industries & Statistics Authority, Government of Maharashtra, Queen's Barracks No. 11, Foreshore Road, Bombay-1.
- \*6. Director of Industries, Government of West Bengal, 1, Hastings Street (9th Floor), Calcutta-1.
- †7. Director of Industries & Commerce, Government of Kerala, Trivandrum
8. Director Industries, Government of Madras, Madras.
- \*9. Chief Secretary to the Government of Punjab, Chandigarh.
- \*10. Chief Secretary to the Government of Andhra Pradesh, Hyderabad.
- \*11. Chief Secretary to the Government of Madras, Madras.
- †12. Chief Secretary to the Government of Madhya Pradesh, Bhopal. .
- †13. Chief Secretary to the Government of Rajasthan, Jaipur.
14. Chief Secretary to the Government of Jammu & Kashmir, Srinagar.
- †15. Chief Secretary to the Government of Assam, Shillong.
- \*16. Chief Secretary to the Government of Uttar Pradesh, Lucknow.
17. Chief Secretary to the Government of Bihar, Patna.
- \*18. Chief Secretary to the Government of Orissa, Bhubaneswar.
19. Chief Commissioner, Delhi State, Delhi.
- †20. Chief Commissioner, Himachal Pradesh Administration, Simla-4.
- \*21. Chief Secretary to the Government of Mysore, Mysore Government Secretariat, Vidhana Soudha, Bangalore.
- †22. Chief Secretary to the Government of Kerala, Trivandrum.
23. Chief Secretary to the Government of Maharashtra, Bombay.
- \*24. Chief Secretary to the Government of West Bengal, Calcutta.
- \*25. State Trading Corporation of India Ltd., Express Building, 9/10, Mathura Road, New Delhi.
26. First Secretary (Commercial) to the High Commission of India in Canada, 200, McLaren Street, Ottawa, Canada.

- \*27. Commercial Counsellor to the Embassy of India, 2107, Massachusetts Avenue, N. M. Washington—D.C. (U.S.A.).
- \*28. Counsellor (Commercial) to the High Commission of India in U. K., India House, Aldwych, London, W.C. 2.
- \*29. First Secretary (Commercial) to the Embassy of India, Opernring 1, Vienna 1 (Austria).
- \*30. First Secretary (Commercial) to the Embassy of India, 262, Koblenzer Strasse, BONN (W. Germany).
- 31. First Secretary (Commercial) to the Embassy of India, 15, Rue Alfred Dehodeneg, Paris (France).
- \*32. Collector of Customs, New Customs House, Bombay.
- \*33. Collector of Customs, Custom House, Madras.
- \*34. Collector of Customs, Custom House, Calcutta.

#### OTHERS :

- \*1. Andhra Chamber of Commerce, Andhra Chamber Building 272/3, Angappa Naick Street, Madras-1.
- 2. Madura-Ramnad Chamber of Commerce, 90-92, East Aranimoola Street, Madurai-1.
- 3. Hindustan Chamber of Commerce, 168, Broadway, Madras-1.
- 4. Mysore Chamber of Commerce, Kempegowda Road, Bangalore-9.



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## APPENDIX II

(Vide Paragraph 3.2)

*Statement showing the factories visited by the Commission and other Officers*

Sl. No.	Name of the Factory	Location of Factory	By whom visited	Date of visit
1.	Indian Aluminium Company Ltd.	Alupuram (Alwaye) (Reduction Works)	Shri K.R.P. Aiyangar, Chairman and Dr. S. K. Muranjan, Shri J.N. Dutta & Shri R. S. Bhatt, Members.	5th January, 1960.
2.	Mysore Premier Metal Factory.	Madras	Shri K.R.P. Aiyangar, Chairman.	25th April, 1960.
3.	Aluminium Corporation of India Ltd.	Jaykaynagar (Asansol).	Dr. S. K. Muranjan, Shri J. N. Dutta and Shri R. S. Bhatt, Members.	8th June, 1960.
4.	Indian Aluminium Company Ltd.	Belur (Rolling Mill).	Dr. S. K. Muranjan, Shri J. N. Dutta and Shri R. S. Bhatt, Members.	10th June, 1960.
5.	Indian Aluminium Company Ltd.	Hirakud (Reduction Works)	Dr. S. K. Muranjan, Shri J. N. Dutta and Shri R. S. Bhatt, Members.	12th June, 1960.
6.	Indian Aluminium Company Ltd.	Muri (Alumina Works).	Shri K.R.P. Aiyangar, Chairman.	27th July, 1960.
7.	Aluminium Corporation of India Ltd.	Jayakaynagar (Asansol).	Shri K.R.P. Aiyangar, Chairman.	28th July, 1960.
8.	Indian Aluminium Company Ltd.	Belur (Rolling Mill).	Shri K.R.P. Aiyangar, Chairman.	1st August, 1960.
9.	Venesta Foils Ltd.	Kamarhati, 24, Parganas.	Shri K.R.P. Aiyangar, Chairman and Dr. S. K. Muranjan, Shri J. N. Dutta and Shri R. S. Bhatt, Members.	1st August, 1960.
10.	Indian Aluminium Company Ltd.	Hirakud (Reduction Works)	Shri K.R.P. Aiyangar, Chairman.	3rd August, 1960.
11.	Aluminium Corporation of India.	Jaykaynagar (Asansol).	Shri Hari Bhushan, Technical Director (Engineering & Metallurgy).	13th February, 1960.

APPENDIX III  
(Vide Paragraph 3.3)

*List of persons who attended the public inquiry on 20th July, 1960*

**PRODUCERS :**

1. Shri H. V. Echols	}	Representing	Indian Aluminium Co. Ltd., 31, Chowringhee Road, Calcutta-16.
2. Shri A. L. Sabharwal			
3. Shri R. F. Sharratt			
4. Shri S. K. Basu			
5. Shri D. K. Baheti			
6. Shri C. C. Fletcher			
7. Shri K. K. Bhasin	}	Do.	Aluminium Corporation of India Ltd., 7, Council House Street, Calcutta.
8. Shri N.L.V. Subramanyam.			
9. Shri J. Agarwal			
10. Shri V. D. Agarwal			
11. Shri S. S. Kothari	}	Do.	Hindustan Aluminium Corporation Ltd., Industry House, 159, Churchgate Reclamation, Bombay-1.
12. Shri B. D. Jaimini			
13. Shri D. G. Mehta			
14. Shri H. N. Kapadia	}	Do.	Madras Aluminium Ltd., C/o. Harshadray, Pvt. Ltd., Advani Chambers, 1st Floor, Sir P. M. Road, Bombay-1.
15. Shri T. A. Viswanathan			
16. Shri R.I.L. Chisholm		Do.	Venesta Foils Ltd., Kamarhati, 24, Parganas, W. Bengal.
17. Shri R. M. Shah	}	Do.	Metal Rolling Works Pvt. Ltd., 104, Sion-Matunga Estate, Sion, Bombay-22.
18. Shri M. Ramakantan			
19. Shri N. M. Shah			
20. Shri S. Aggarwal	}	Do.	Devidayal Metal Industries (Private) Ltd., P. O. Box No. 6215, Gupta Mills Estate Bombay-10.
21. Shri K. K. Kapur			
22. Shri M. D. Mundhra	}	Do.	Rashtriya Metal Industries Ltd., Kurla Road, P. O. J. B. Nagar, Andheri, Bombay-59.
23. Shri H. C. Goyal			
24. Shri J. D. Damani			
25. Shri K. Bhambri	}	Do.	Popular Metal Works & Rolling Mills, Sion, Bombay-22.
26. Shri S. P. Bhambri			
27. Shri A. G. Tambawalla	}	Do.	Hooseini Metal Rolling Mill, (P) Ltd., Atlas Mill Compound Reay Road, Bombay-10.
28. Shri C. A. Shah			

29. Shri B. G. Vakharia . Representing Eastern Smelting & Rolling Mills, Old Agra Road, Near New Kurla Mill, Kurla, Bombay-70.

#### PRODUCERS : ASSOCIATION

- |                            |   |     |   |
|----------------------------|---|-----|---|
| 30. Shri F. A. Jasdanwalla | } | Do. | Indian Non-Ferrous Metals Manufacturers' Association, India Exchange Place, Calcutta. |
| 31. Shri P. Majumdar       |   |     |   |

#### IMPORTERS :

- |                               |     |   |  |
|-------------------------------|-----|---|--|
| 32. Shri E. P. Gopalakrishnan | Do. | Alcan Asia Ltd., 41, Chowringhee Road, Calcutta.                      |  |
| 33. Shri H. K. Shah . . .     | Do. | Jeewanlal (1929) Ltd., 31, Netaji Subhas Road, Calcutta-1.            |  |
| 34. Shri D. D'Mello . . .     | Do. | Aluminium Hindusthan Pvt. Ltd. 2, Jessore Road, Dum Dum, Calcutta-28. |  |
| 35. Shri R. G. Shah           | }   | Do.   | Lallubhai Amichand Private Ltd., 225/7, Tardeo Road, Bombay-7. |
| 36. Shri G. T. Shah           |     |   |  |

#### CONSUMERS :

- |                                |     |   |  |
|--------------------------------|-----|---|--|
| 37. Shri C. P. Bhatt           | }   | Do.   | All India Non-Ferrous Metalware Manufacturers' Association, Liberty Building, Marine Lines Bombay-1. |
| 38. Shri B. K. Gupta           |     |   |  |
| 39. Shri J. F. Fernandes       |     |   |  |
| 40. Shri M. R. Sekar           | }   | Do.   | Metal Box Co. of India Ltd., Barlow House, Chowringhee, Calcutta-20.                                 |
| 41. Shri M. B. Minocher-Homji. |     |   |  |
| 42. Shri S. M. Bhagat . . .    | Do. | Zenith Tin Works Private Ltd., Clerk Road, Mahalaxmi, Bombay-11.                            |  |
| 43. Shri B. V. D. Menon . . .  | Do. | Aluminium Industries Ltd., Kundara, Kerala State.   |  |
| 44. Shri S. P. Pinto . . .     | Do. | Indian Smelting & Refining Co. Ltd., Industry House, 159, Churchgate Reclamation, Bombay-1. |  |
| 45. Shri K. V. Shah . . .      | Do. | Light Metal Works, New Sun Mill Compound Delisle Road, Bombay-13.                           |  |
| 46. Shri A. G. Scott . . .     | Do. | Godfrey Phillips India Ltd., Chakala, Andheri, Bombay-41.                                   |  |
| 47. Shri D. Velayudham . . .   | Do. | Controller of Stores, Western Railway, Churchgate, Bombay.                                  |  |

## GOVERNMENT DEPARTMENTS :

48. Shri T.A.S. Balakrishnan, Representing Deputy Secretary.		Ministry of Commerce & Industry, Udyog Bhavan, King Edward Road, New Delhi.
49. Shri C. J. Shah . . .	Do.	Development Wing, Ministry of Commerce & Industry, Udyog Bhavan, King Edward Road, New Delhi.
50. Dr. D. P. Antia . . .	Do.	Development Council for Non-ferrous Metals, C/o. Metals and Ores Co., Division of Union Carbide India Ltd., 1 & 2, Brabourne Road, Post Box No. 2170, Calcutta.
51. Shri A. B. Rao . . .	Do.	Indian Standards Institution, Manak Bhavan, 9, Mathura Road, New Delhi.
52. Shri K. R. Rajagopalan	Do.	Directorate General of Supplies & Disposals, N. I. Building Parliament Street, New Delhi.
53. Shri D. S. Godbole 54. Shri P. K. Raut	Do.	Director of Industries & Statistics Authority, Government of Maharashtra, Queen's Barracks No. 11, Foreshore Road, Bombay-1.
55. Shri V. R. Jagasia . . .	Do.	Collector of Customs, Bombay.

## OTHERS :

56. Shri J. P. Sanghrajaka . . .	Do.	Andhra Chamber of Commerce, Andhra Chamber Building, 272/3, Angappa Naick St., Madras-1.
57. Shri G. R. Rao . . .	Do.	Hindustan Chamber of Commerce, 168, Broadway, Madras-1.
58. Shri C. M. Mody . . .	Do.	Deccan Aluminium Stores, 56, 1st Bhoiwada, Bombay-2.
59. Shri M. D. Dewari . . .	Do.	'Vyapar', Bombay.

## APPENDIX IV

(Vide Paragraph 11.2)

Statement showing country-wise imports of aluminium and its manufactures during 1957, 1958, 1959 and January-June 1960

Sl. No.	Name of the Article	Origin of Import	1957		1958		1959		1960 (Jan.-June.)	
			Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)	Qty. (Cwt.)	Value (Rs.)
1	2	3	4	5	6	7	8	9	10	11
<b>(A) Aluminium and Aluminium Alloys Unwrought.</b>										
1.	Aluminium Base Alloy.	U. K.	145	64,919	1,310	1,84,919	404	52,701	20	10,799
		Germany W.	21	11,380	..	..	..	..	114	59,948
		Switzerland	1	340	..	..	..	..	..	..
		Canada	..	..	..	..	849	122,282	..	..
		U.S.A.	4	6,218	..	..	..	..	..	..
		<b>TOTAL</b>	<b>171</b>	<b>82,857</b>	<b>1,310</b>	<b>1,84,919</b>	<b>1,253</b>	<b>1,74,983</b>	<b>134</b>	<b>70,747</b>
2.	Aluminium Ingots.	France	..	..	..	..	900	1,04,238	380	44,721
		U.K.	5,639	7,68,226	1,561	2,02,141	1,461	2,00,017	564	83,665
		Yugoslavia	..	..	2,000	2,48,943	..	..	..	..
		U.S.S.R.	1,914	2,88,290	13,749	17,70,986	32,443	40,69,577	9,841	12,10,714
		Sweden	..	..	240	29,671	..	..	..	..
		Norway	65,274	91,81,683	59,150	76,29,145	845	1,02,395	1,020	1,22,834
		Germany W.	..	..	20	2,389	..	..	..	..
		Netherlands	2	260	..	..	..	..	..	..
		Belgium	..	..	..	50	..	..	..	..
		Columbia	..	..	..	..	552	66,751	..	..

Canada	23,034	31,01,126	46,426	56,77,890	90,071	1,12,83,433	56,295	71,42,570
Austria	18,345	32,59,687	500	58,676	1,199	1,40,691	6,243	7,65,795
U.S.A.	..	..	12,849	16,23,254	4,070	4,91,006	800	99,962
China	..	..	..	..	..	..	..	..
<b>TOTAL</b>	<b>1,14,208</b>	<b>1,65,99,272</b>	<b>1,36,495</b>	<b>1,72,43,145</b>	<b>1,31,541</b>	<b>1,64,58,108</b>	<b>75,143</b>	<b>94,70,262</b>
<b>3. Others</b>	<b>1</b>	<b>583</b>	<b>1</b>	<b>819</b>	<b>112</b>	<b>29,927</b>	<b>..</b>	<b>80</b>
U.K.	1	1,798	4	6,855	1	500	377	2,19,668
Germany W.	..	..	4,484	5,65,421	3,212	4,05,176	..	..
Canada	10	1,366	..	..	..	..	..	..
France	740	31,595	1	2,329	..	2,020	..	..
U.S.A.	..	..	..	..	..	..	5	1,253
Italy	..	..	..	..	..	..	..	..
<b>TOTAL</b>	<b>752</b>	<b>35,342</b>	<b>4,490</b>	<b>5,75,424</b>	<b>3,325</b>	<b>4,37,623</b>	<b>382</b>	<b>2,21,001</b>
<b>TOTAL OF A (1 to 3)</b>	<b>1,15,131</b>	<b>1,67,471</b>	<b>1,42,295</b>	<b>1,80,03,488</b>	<b>1,36,119</b>	<b>1,70,70,714</b>	<b>75,659</b>	<b>97,62,010</b>
<b>(B) Aluminium and</b>								
<b>Aluminium Al-</b>								
<b>loys Worked</b>								
<b>Bars, Rods</b>								
<b>Plates, Sheets,</b>								
<b>Wires, Pipes,</b>								
<b>Tubes, Castings</b>								
<b>and Forgings.</b>								
Bare Aluminium	..	..	..	..	5	932	..	..
Wire Solid Hard	..	..	..	..	19,814	30,93,424	6,819	10,02,431
Drawn.	312	61,814	6	2,377	..	138	15	4,725
U.K.	4	962	..	..	..	..	..	..
Japan	..	..	..	..	..	..	..	..
Germany W.	139	72,398	13	3,028	97	17,064	..	..
U.S.A.	..	..	28	15,865	131	73,197	40	22,807
Canada	..	..	..	..	..	..	15,129	22,67,818
France	..	..	..	..	..	..	3	1,400
<b>TOTAL</b>	<b>455</b>	<b>1,35,174</b>	<b>47</b>	<b>21,270</b>	<b>20,047</b>	<b>31,84,755</b>	<b>22,006</b>	<b>32,99,181</b>



1	2	3	4	5	6	7	8	9	10	11
5. Bars & Rods										
U.K.	56,955			1,12,97,192	21,667	35,23,391	9,646	15,33,173	592	1,50,266
Sweden	10,000			23,90,889	..	..	..	..	..	..
Irish Republic	3,064			5,85,606	..	..	..	..	..	..
Germany W.	1,019			1,90,730	508	87,091	17	1,000	36	10,890
France	..			..	..	..	1	6,660	2	500
Belgium	..			1,13,765	..	..	..	..	1,213	1,14,895
Spain	981			1,81,178	..	..	..	..	..	..
Switzerland	100			56,741	..	..	..	..	..	..
Austria	12,627			23,66,215	1,482	2,52,768	2	501	..	..
Yugoslavia	3,939			7,35,756	3,959	6,99,712	11,981	18,70,317	12,222	18,05,431
Canada	87,699			1,51,35,861	1,30,876	2,11,49,353	1,19,599	1,80,51,490	61,980	93,68,765
U.S.A.	55,926			1,03,12,464	26,904	41,50,890	2,494	3,85,008	22	6,870
China	..			..	..	..	..	..	4,410	6,67,930
TOTAL	2,32,310			4,33,66,397	1,85,396	2,98,63,205	1,43,740	2,18,48,149	80,477	1,21,25,547
6. Circles										
U.K.	10			80,951	..	..	3,197	5,53,254	2,076	3,26,141
Germany W.	2			996	..	..	..	..	..	..
Japan	13			2,611	..	..	..	..	..	..
Austria	..			..	..	..	..	..	40	6,994
TOTAL	25			84,558	..	..	3,197	5,53,254	2,116	3,33,135
7. Foil Aluminium for Teacheat Lining.										
U.K.	99			39,372	15,403	29,48,220	31,955	62,08,534	22,198	44,25,978
Germany W.	115			55,124	1	499	36	21,526	..	..
Belgium	19			3,088	..	..	..	..	..	..
Switzerland	51			16,539	..	..	7	1,994	..	..
Austria	77			22,654	16	3,447	..	..	..	..
Italy	..			..	12	2,488	..	..	..	..
Ceylon	40			4,409	..	..	..	..	..	..
TOTAL	401			1,41,186	15,432	29,54,654	31,998	62,32,054	22,198	44,25,978

8. Foil & Leaf ex-  
cluding Tea-  
chest Lining.

U.K.	4,531	9,74,766	245	2,00,754	257	2,14,735	96	66,038
Sweden	63	5,31,779	..	..	..	..	..	..
Germany W.	5,507	19,39,783	885	2,49,001	77	42,254	42	22,773
Germany E.	3	807	..	..	..	..	..	..
Netherlands	6	1,686	..	..	..	..	..	..
Switzerland	1,981	9,18,752	331	1,41,990	90	39,742	211	92,995
Italy	20	5,918	38	8,579	4	2,019	11	6,633
Austria	351	1,23,645	15	6,605	..	..	..	..
France	..	..	6	7,413	..	..	..	..
Australia	..	..	1	336	..	..	2	1,094
Belgium	..	..	..	..	..	..	..	..
Japan	54	47,585	2	1,181	2	494	..	..
Switzerland	16	6,561	..	..	4	4,465	..	..
Hong Kong	..	..	..	..	..	..	..	..
U.S.A.	13	7,703	15	15,506	58	23,298	..	..
Denmark	..	..	..	..	..	..	155	50,500

TOTAL

TOTAL	12,545	45,58,985	1,538	6,31,365	492	3,27,306	517	2,40,035
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9. Pipes & Tubes

U.K.	2,499	10,01,761	360	1,48,526	774	2,67,926	2,054	5,56,805
Japan	..	..	..	..	1	632	4	1,353
Germany W.	188	52,094	179	72,493	646	1,53,715	310	1,13,698
Netherlands	..	..	2	2,124	..	..	..	673
Switzerland	47	21,889	28	13,766	122	45,622	..	..
Austria	..	..	50	11,450	20	5,999	10	3,133
Italy	9	10,867	10	7,064	..	..	..	..
Malaya	..	..	1	1,370	..	..	..	..
U.S.A.	62	25,990	..	..	..	2,026	10	5,474
Canada	..	..	1	656	..	..	..	..
Australia	..	..	..	..	..	..	..	..
India	..	..	..	..	..	..	113	30,021

TOTAL

TOTAL	2,805	11,12,658	631	2,57,449	1,563	4,75,920	2,507	7,11,155
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1	2	3	4	5	6	7	8	9	10	11.
10. Powder .	U.K. . . . .	1,718	3,74,488	794	1,91,021	2,600	5,89,794	532	1,27,719	
	Germany W. . . . .	897	1,82,176	594	1,43,455	827	2,07,487	539	1,30,279	
	Sweden . . . . .	..	..	1	170	..	..	..	..	
	Belgium . . . . .	21	4,975	7	1,534	..	..	..	..	
	Canada . . . . .	..	..	..	230	..	..	..	..	
	U.S.A. . . . .	3	2,218	1	847	..	8	..	60	
	TOTAL .	2,639	5,63,857	1,397	3,37,257	3,427	7,97,289	1,071	2,58,058	
11. [Sheets, Plates & Strips.	U.K. . . . .	35,651	83,95,655	20,208	41,73,766	9,792	19,57,076	11,964	24,54,578	
	Norway . . . . .	2	484	..	..	230	30,092	..	64	13,173
	France. . . . .	..	..	5	3,385	19	4,310	..	..	
	Denmark . . . . .	14	5,149	..	..	25	11,429	..	..	
	Italy . . . . .	..	..	100	23,749	57	23,489	29	10,110	
	Germany W. . . . .	81	27,578	689	2,66,402	316	1,01,207	337	89,883	
	Netherlands . . . . .	14	6,474	62	21,490	11	2,360	23	8,997	
	Czechoslovak . . . . .	..	..	2	940	..	..	..	..	
	Belgium . . . . .	880	2,02,588	..	..	195	81,251	..	..	
	Lebanon . . . . .	..	..	..	32	..	..	..	..	
	Switzerland . . . . .	222	56,700	208	47,100	1,137	2,43,017	386	1,36,741	
	Austria . . . . .	25	5,643	126	26,377	36	8,472	67	12,664	
	Japan . . . . .	..	..	416	80,915	14	2,792	40	11,284	
	Canada . . . . .	9	2,433	..	..	..	..	..	..	
	Yugoslavia . . . . .	..	..	..	..	200	35,575	..	..	
	U.S.A. . . . .	82	32,508	209	72,056	146	65,205	117	30,548	
	Australia . . . . .	..	..	..	77	..	..	..	..	
	TOTAL .	36,980	87,35,212	22,025	47,16,289	12,178	25,66,275	13,027	27,67,978	
12. Wires N.E.S.	Hungary . . . . .	..	..	4	2,338	..	..	..	..	48,186
	U.K. . . . .	478	1,45,494	92	33,978	71	27,226	140	..	..
	Germany W. . . . .	32	16,167	247	51,049	20	8,520	..	..	..
	Switzerland . . . . .	182	67,220	..	..	..	..	..	..	..

Sweden	..	15	10,394	..	1	..	2,112	..	560	..	7	..	4,662
Hong Kong	..	3	7,144	..	..	..	562	..	1,589	..	..	..	417
Japan	..	10,262	16,06,453	..	1,475	..	1,85,734	77	21,995	..	..	..	..
Netherlands	..	88	56,196	..	176	..	1,00,140	2	1,157	..	159	..	92,497
Canada	..	..	..	..	..	..	..	..	..	..	..	..	..
U. S. A.	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	11,060	19,09,068	1,995	3,75,913	170	61,047	306	1,45,762	..	..	..	..
U.K.	..	10,371	18,05,174	1,667	5,47,369	1,981	7,55,365	3,933	9,64,648	..	..	..	293
Sweden	..	..	..	..	..	..	..	..	..	..	..	..	..
Norway	..	2	..	75	..	..	..	..	..	..	..	..	..
Denmark	..	..	56	..	..	..	10,007	..	..	..	..	..	..
Germany W.	..	414	2,24,499	726	3,96,447	786	2,43,316	919	4,32,058	..	..	..	..
Netherlands	..	..	..	8	3,860	..	..	..	..	..	..	..	..
Belgium	..	4	5,942	..	..	..	..	..	..	..	..	..	..
France	..	1	5,846	..	..	..	..	..	..	..	..	..	..
Switzerland	..	320	1,48,159	..	47	..	18,458	81	36,065	21	..	..	1,702
Italy	..	614	2,30,663	..	19	..	8,810	340	1,03,768	404	..	..	1,42,436
Austria	..	21	7,492	..	354	..	84,498	30	8,547	5	..	..	1,194
Hungary	..	11	3,228	..	..	..	..	..	..	..	..	..	..
Ceylon	..	100	11,225	..	..	..	..	..	..	..	..	..	..
Singapore	..	1	231	..	..	..	..	1	118	..	..	..	..
Hong Kong	..	21	16,239	..	..	..	..	1	530	..	..	..	..
Japan	..	..	937	..	..	..	..	3	3,802	..	..	..	12,707
Canada	..	1,545	2,47,909	9,407	15,96,973	24,037	50,93,335	3,712	4,53,120	..	..	..	..
U.S.A.	..	25	28,358	204	1,40,415	13	8,373	19	10,823	..	..	..	..
Australia	..	20	17,134	38	9,104	2	501	273	73,088	..	..	..	..
Bahrein Is.	..	..	..	..	..	..	..	..	308	..	..	..	..
Burma	..	..	..	..	..	..	..	..	50	..	..	..	..
TOTAL	..	13,470	27,53,167	12,497	28,15,976	27,283	62,55,438	8,618	20,92,627	..	..	..	..
TOTAL of B (4 to 13)	..	3,12,690	6,33,60,262	2,40,958	4,19,73,378	2,44,095	4,23,01,487	1,52,837	263,99,456	..	..	..	..
GRAND TOTAL (A + B)	..	4,27,821	8,00,77,733	3,83,253	5,99,76,866	3,80,214	5,93,72,201	2,28,496	3,61,61,466	..	..	..	..

# APPENDIX V

(Vide paragraph 15)

A. Statement showing c.i.f. prices and landed costs of imported aluminium ingots, sheets and circles.

Source of information:	Origin of import	Date of import	Type and Specification	C.i.f. price	Customs duty	Clearing charges	Rs. per ton	
							Landed Cost	
1	2	3	4	5	6	7	8	
<b>I. Aluminium ingots</b>								
1. Collector of Customs, Madras.	Canada	24-9-59	Alcan 99.5% minimum purity aluminium ingot.	2417.00	845.95	37.05	3400.00	
2. State Trading Corporation of India Ltd., New Delhi.	U.S.S.R.	October & November '59.	Aluminium ingot 99.5% purity.	2371.45	830.01	17.44	3218.90	
3. High Commission of India, London.	Canada	3-8-60 (current quotation)	Virgin aluminium ingot 99.5% minimum purity.	2480.00	..	..	..	
4. Alcan Asia Ltd., Calcutta.	Norway	29-7-60 (current quotation)	Ditto.	2508.80	..	..	..	
	Canada	Do.	Ditto.	2508.80	..	..	..	
5. Lallubhai Amichand Private Ltd., Bombay.	Canada	31-12-59	Ditto.	2411.70	844.09	20.00	3275.79	
	Canada	7-5-60 (current quotation).	Ditto.	2498.22	..	..	..	

6. Jeewanlal (1929) Ltd., Calcutta. Canada Feb. to May '59. 2397-78 839-22 15-00 3252-00

Canada 7-5-60 (current quotation). Ditto. 2489-00 .. ..

## II. Sheets

1. Aluminium-Hindustan Pvt. Ltd., Calcutta. U. K. Jan. '58 Aluminium imprest sheet 18 S.W.G. 7109-84 2502-76 40-00 9652-60

U. K. Feb. '58 Aluminium sheet 33 S.W.G. 4536-32 1596-84 40-00 6173-16

U. K. Feb. '58 Aluminium sheet 28 S.W.G. 4601-93 1619-94 40-00 6261-87

U. K. June '58 Aluminium sheet 31 S.W.G. 5106-75 1797-64 40-00 6944-39

U. K. March '60 (current quotation). Aluminium imprest sheet 18 S.W.G. 7230-35 .. ..

U. K. Do. Aluminium sheet 33 S.W.G. 5921-39 .. ..

U. K. Do. Aluminium sheet 28 S.W.G. 5235-76 .. ..

U. K. Do. Aluminium sheet 31 S.W.G. 5609-74 .. ..

2. Alcan Asia Ltd., Calcutta. U. K. 29-7-60 (current quotation). 2S (99% minn. purity) half-hard temper aluminium sheet, 20 S.W.G. x 3' x 8'. 4928-00 .. ..

U. K. Do. 3S (14% mn. balance Al) aluminium alloy sheet, half-hard temper, 20 S.W.G. x 3' x 8'. 4972-80 .. ..

1	2	3	4	5	6	7	8
Alcan Asia Ltd., Calcutta— <i>Contd.</i>	U. K.	29-7-60 (current quotation).	M 57 S (2% Mg. $\frac{1}{2}$ % mn. balance Al) aluminium alloy sheet, half-hard temper, 20 S.W.G. $\times$ 3' $\times$ 8'.	5174.40	..	..	..
	Switzerland	Do.	2S $\frac{1}{2}$ H (99% min. purity) alu- minium sheets, 20 S.W.G. $\times$ 3' $\times$ 8'.	4748.80	..	..	..
	Do.	Do.	3S $\frac{1}{2}$ H (1 $\frac{1}{2}$ % Mn. balance Al) aluminium sheets, 20 S.W.G. $\times$ 3' $\times$ 8'.	4905.60	..	..	..
III. Circles							
1. Alcan Asia Ltd., Calcutta .	U. K.	29-7-60 (current quotation).	2S (99% Min. purity) aluminium circles, soft temper 20 S.W.G. $\times$ 6' to 18' dia.	5219.20	..	..	..
	Switzerland	Do.	2S (99% min. purity) alumi- nium circles 20 S.W.G. $\times$ 6' to 18' dia.	4883.20	..	..	..
2. Lallubhai Amichand Pvt. Ltd., Bombay.	U. K.	31-8-59	Aluminium circles mill finish spinning and deep drawing quality 38" & 40" dia.	3480.96	1218.34	22.00	4721.30
3. Jeewanlal Calcutta.	U. K.	April, 1959 to Feb. 1960.	Aluminium circles 280 Mill finish 99%.	3117.50	1091.13	15.00	4223.63
	U. K.	7-5-60 (latest quotation)	Aluminium circles all sizes and for all gauges upto 24.	3412.00	..	..	..

B. Statement showing c.i.f./f.o.b. quotations of ingots, sheets and circles as furnished by producers and the Embassy of India in West Germany. (Rs. per ton)

I Source	Type and Specification	C.i.f. prices
Indian Aluminium Company Ltd., Calcutta	Aluminium ingot	2480 (Norway)
	Flat sheet (common alloy 20 gauge)	4682 (U.K.)
	Flat sheet (Magnesium alloy, 18 gauge)	4726 (U.K.)
	Circle (Common alloy 20 gauge)	4995 (U.K.)
II. Source	Type and Specification	F.o.b. price
Aluminium Corporation of India Ltd., Calcutta.	Ingots	2479.94 (U.K.)
	Ingots	2599.94 (Canada)
	Ingots	2773.26 (U.S.A.)
	Ingots	2893.26 (Italy)
	Ingots	2439.91 (Japan)
	Ingots	2199.95 (France)
	Sheets 16 S.W.G.	4293.23 (U.K.)
	Sheets 16 S.W.G.	4213.23 (Italy)
	Sheets 16 S.W.G.	4599.89 (Canada)
	Sheets 16 S.W.G.	4959.88 (U.S.A.)
	Sheets 16 S.W.G.	4479.89 (France)
Embassy of India in W. Germany, Bonn.	Circles 6" to 18" dia. 20 S.W.G.	4853.21 (U.K.)
	2S alloy sheets (Al.99) 1000 × 2000 mm. 1.6-0.9 mm. strength.	3768 to 3850
	3S alloy sheets (Al. MN) 1000 × 2000 mm. 1.6-0.9 mm. strength.	3885 to 3966
	Circles 2"-14" diameter	5249 to 6999



# APPENDIX VI

(Vide paragraph 18·2)

Statement showing selling prices of ingots, sheets and circles

Indian Aluminium Company Ltd., Calcutta		Aluminium Corporation of India Ltd., Calcutta		
I. <i>Aluminium Ingots</i>				
		Rs. per ton	Alloy Ingots.	Rs. per ton
Commercial Grade.	. . . . .	3,280	L.M. 6	4064·20
Conductor Grade . . . . .	. . . . .	3,100	L.M. 13	4612·87

NOTES.—(i) The above prices are for ex-works delivery.  
(ii) Prices are exclusive of all taxes.

NOTES.—(i) The above prices are F.O.R. Works at Jaykayanagar.  
(ii) Prices are exclusive of all taxes.

Indian Aluminium Company Ltd., Calcutta		Aluminium Corporation of India Ltd., Calcutta	
Specification and gauge	Rate per lb. (Rs.)	Specification and gauge.	Rate per lb. (Rs.)
II. Aluminium Flat Sheets			
Indal 2S and 3S—16 gauge and under	2·21		
Indal 2S and 3S—18 gauge and under	.	JK 2S and 3S 1/4"	2·12
Indal 2S and 3S—20 gauge and under	.	JK 2S and 3S 3/16"	2·12
Indal 2S and 3S—22 gauge and under	.	JK 2S and 3S 8 SWG	2·12

Indal 2S and 3S—24 gauge and under	2.68	JK 2S and 3S 10"	2.15
Indal 2S and 3S—26 gauge and under	2.81	JK 2S and 3S 12"	2.15
Indal 2S and 3S—28 gauge and under	2.90	JK 2S and 3S 14"	2.15
Indal 2S and 3S—30 gauge and under	3.00	JK 2S and 3S 16"	2.15
Indal M57S 16 gauge and under	2.40	JK 2S and 3S 18"	2.23
Indal M57S 18 gauge and under	2.54	JK 2S and 3S 20"	2.31
Indal M57S 20 gauge and under	2.62	JK 2S and 3S 22"	2.40
Indal M57S 22 gauge and under	2.93	JK 2S and 3S 24"	2.62
<i>Flat Sheets</i>			
Indal 65 SW 16 gauge and under	2.73		
Indal 65 SW 18 gauge and under	2.87		
Indal 65 SW 20 gauge and under	2.95		
65 SWP 16 gauge and under	2.79		
65 SWP 18 gauge and under	2.93		
65 SWP 20 gauge and under	3.01		

NOTES.— (1) The above prices are for packed delivery ex-Belur Works, Howrah. For unpacked deliveries a rebate of 6 nP. per lb. is allowed.

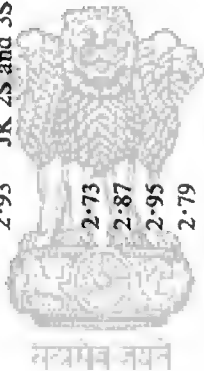
(2) These prices are for minimum quantities of 560 lbs. in any one specification i.e., same gauge, temper, size and alloy. For smaller quantities special quotations are furnished on enquiry.

(3) Prices are exclusive of all taxes.

NOTES.—(1) The above prices are F.O.R. Works, at Jaykaynagar delivered in Calcutta.

(2) Minimum quantity acceptable in any size, gauge or temper will be 250 K.g. (5 cwts.).

(3) Prices are exclusive of excise duty.



Dia. Gauge	2"	2½"	3"	3½"	4" & above but upto 24"	Above 24" but upto 36"	Above 36" but upto 48"	Gauge and Size	Rate per lb. (Rs.)
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(In Rs. per lb.)

III. Aluminium Circles

10-16	..	..	..	..	2.23	2.26	2.34		
18	..	..	..	..	2.26	2.32	2.45	16-19 SWG 4"—24" (Rising by ½")	2.20
20	2.50	2.43	2.40	2.37	2.31	2.39	2.50	16-19 SWG 25"—36" (Rising by 1")	2.26
22	2.04	2.56	2.53	2.50	2.40	2.57	..	20-21 SWG 4"—24" (Rising by ½")	2.25
24	2.91	2.84	2.77	2.74	2.65	2.82	..	20-21 SWG 25"—36" (Rising by 1")	2.33
								22 SWG 4"—24" (Rising by ½")	2.34

NOTES.— (1) These prices are for packed deliveries ex-works Belur, Howrah, for minimum quantities of 560 lbs. in any one specification.

(2) For unpacked deliveries a rebate of 6 nP. per lb. is allowed.

(3) Prices are exclusive of all taxes.

(2) Minimum quantity acceptable in each size and gauge is 250 Kg. (5 cwts.).

(3) Prices are exclusive of all taxes.

**Devidayal Metal Industries Private Ltd. Bombay.**

**Rashtriya Metal Industries, Ltd. Bombay.**

**Mysore Premier Metal Factory, Madras.**

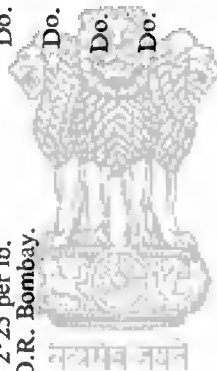
**Metal Rolling Works Private Ltd. Bombay**

**Aluminium Circles in 'I.S.I.' Quality**  
**Dia. Size. Thickness Price per lb. Rs.**

3'-4½'	21G or 22G	2.51
5'-7½'	21G or 22G	2.41
8'-24'	20G, 21G or 22G	2.36
8'-24'	16G, 17G, 18G or 19G	2.31

Aluminium Circles	16	2.01	4' × 8½'	20-21 SW/G	2.70
Do.	18	2.04	9' to 16'	16, 18, 20, 22 SW/G	2.65
Do.	20	2.09	17' to 24'	16, 18, 20, 22 SW/G	2.75
Do.	22	2.17			
Do.	24	2.40			

Rs. 2.25 per lb.  
 F.O.R. Bombay.



**Note :-** The above prices are F.O.R. Bombay exclusive of taxes but include excise duty. A discount of 1% is allowed to its selling agents on the price list.

The above prices are exclusive of excise duty.

Prices are not ex-factory.